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## ABSTRACT

Ideas and activities are provided for teaching computer skills and applications in business classes. Divided into sections on general applications, accounting applications, and word processing, this guide is designed as a supplement for the teacher when exposing students to the uses of computers in these areas. Most of the activities require the use of a microcomputer; however, many can be used to introduce students to computers without actually having them available. The goal of the general applications activities is to develop skills necessary for office occupations and for a variety of personal uses such as money management. The accounting activities introduce the role of the computer in business and develop skills necessary for computerized accounting. The word processing activities are designed to develop job skills in the area of word processing. Also included are recommendations for purchasing and operating computer equipment. The appendix provides many short and simple computer program listings written in the BASIC language for use with the activities. The programs are written for Apple, TRS 80, and Commodore Pet computers, but they can be adapted to other computers with minor modifications. (DC)

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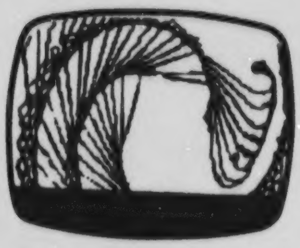
# BUSINESS COMPUTER APPLICATIONS



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# FOREWORD

Computer technology is an essential part of business education that is needed by all students. The business world plays a dominant role in the life of every individual, thus, increasing the need to provide students with computer related skills and understandings necessary for occupational as well as personal use.

Business Computer Applications is designed to assist the teacher by providing activities and ideas for computer learning experiences for the students. The format is of a nature whereby the "user" approach is emphasized. It is hoped that the information contained in this guide will enhance computer knowledge and enable students to function more effectively in our information-oriented society.

The Oklahoma State Department of Education gratefully acknowledges the professional contributions of the committee members who worked so diligently in the preparation of this guide.

Leslie Fisher

Leslie Fisher
State Superintendent

# PHILOSOPHY

Computer technology is one of the biggest innovations that has occurred in teaching and preparing students to enter into the world of business. These changes have placed new responsibilities on business educators. Computer technology is continuing to change the business world by increasing productivity and efficiency of employees in modern business.

Preparing students for modern business technology is one of the greatest challenges in business education. Students must reach a competency level in the new technology in order to prepare them for employment, advanced study, or personal use. Students' need for computer literacy at the performance level is an educational obligation and challenge to the business educator. It is imperative that the business curriculum be flexible to changes in computer technology.

Computer technology is an integral part of our daily lives. Maintaining current knowledge of computer technology and the changes taking place in society is the professional obligation of the business educator.

# ACKNOWLEDGEMENTS

The State Department of Education acknowledges with deep gratitude the interest, integrity, dedication, and untiring effort put forth in the publication of the Business Computer Applications guide by the following people:

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## TABLE OF CONTENTS

Introduction . . . . . . . . . . . . . . . . . . . . . . . . . . 1

Recommendations for Purchase of Equipment . . . . . . . . . . . . . 5

Basic Operation of Equipment . . . . . . . . . . . . . . . . . . . 9

Using the Business Computer Applications Guide . . . . . . . . . . . 10

General Applications . . . . . . . . . . . . . . . . . . . . . . 11

- Bank Reconciliation . . . . . . . . . . . . . . . . . . . . 12
- Career Opportunities . . . . . . . . . . . . . . . . . . . 14
- Career Planning . . . . . . . . . . . . . . . . . . . . . 14
- Change Making . . . . . . . . . . . . . . . . . . . . . . 18
- Credit . . . . . . . . . . . . . . . . . . . . . . . . . 20
- Commissions . . . . . . . . . . . . . . . . . . . . . . . 24
- Data Entry Drills . . . . . . . . . . . . . . . . . . . . 26
- Keyboarding . . . . . . . . . . . . . . . . . . . . . . . 28
- Depreciation . . . . . . . . . . . . . . . . . . . . . . 30
- Economics . . . . . . . . . . . . . . . . . . . . . . . . 32
- English Usage . . . . . . . . . . . . . . . . . . . . . . 34
- Income Tax Justification . . . . . . . . . . . . . . . . . 36
- Insurance . . . . . . . . . . . . . . . . . . . . . . . . 40
- Inventory . . . . . . . . . . . . . . . . . . . . . . . . 44
- Invoices . . . . . . . . . . . . . . . . . . . . . . . . 46
- Discounts . . . . . . . . . . . . . . . . . . . . . . . . 46
- Legal Applications . . . . . . . . . . . . . . . . . . . . 48
- Marketing Applications . . . . . . . . . . . . . . . . . . 50
- Notes and Interest . . . . . . . . . . . . . . . . . . . . 54
- Payroll . . . . . . . . . . . . . . . . . . . . . . . . . 56
- Personal Money Management . . . . . . . . . . . . . . . . 58
- Proration . . . . . . . . . . . . . . . . . . . . . . . . 60
- Savings . . . . . . . . . . . . . . . . . . . . . . . . . 62
- Investment . . . . . . . . . . . . . . . . . . . . . . . 62

Accounting Applications . . . . . . . . . . . . . . . . . . . . . 67

- Introduction . . . . . . . . . . . . . . . . . . . . . . . 68
- Microcomputer Processing of General Ledger Data . . . . . . . 68
- Accounts Receivable . . . . . . . . . . . . . . . . . . . . 72
- Accounts Payable . . . . . . . . . . . . . . . . . . . . . 74

Word Processing . . . . . . . . . . . . . . . . . . . . . . . . . 77

Introduction to Word Processing . . . . . . . . . . . . . . . . 78
Background for Development of Word Processing Basic Skills . . . . . . . . . . . . . . . . . . . . . . 82
Equipment Used in Training Word Processors . . . . . . . . . . 88

Introduction to the Appendix . . . . . . . . . . . . . . . . . . . 103

Using the Appendix . . . . . . . . . . . . . . . . . . . . . . . 105

Suggested Programs . . . . . . . . . . . . . . . . . . . . . . . 107

# INTRODUCTION

The committee to develop a guide for business computer applications strongly believes that high school graduates must be literate in the area of computer technology. What students learn in the application of computers in a business education environment may well be considered a "warmup" to what they may choose to study or what they may use later in life. Computer literacy is an essential investment in students' futures.

Where is the emphasis of computers in our world today? Computer technology is not just for the mathematics and science areas. In fact, of all computer applications approximately 90 percent are business related. Computer specialists have stopped asking what the computer can do and have started asking what users can do with the computer. Educators no longer have to be computer program specialists; however, business educators do need to teach students how to use microcomputers in the modern office, in the home, or in preparation for advanced study.

It is believed that all school systems will soon have microcomputers for use in the classroom. It is imperative that these computers be available in education in relation to their use in society. Since business applications comprise approximately 90 percent of all computer applications, it seems only reasonable that the primary emphasis in our schools should be in business education.

Business teachers must take the initiative to become informed about computer technology. If the business teacher is not proficient in business computer applications, he/she should investigate seminars and workshops offered throughout the state, work through training programs that are provided with software, read current literature, visit a microcomputer vendor, or set up an inservice program for the school to be taught by an educator. Business teachers must be ready and eager to accept the challenge of change.

The committee recognizes that while some schools are equipped with microcomputers, others are not. All students, however, should be exposed to business computer applications. Business departments equipped with text-editing typewriters that classify as word processors are provided with an excellent opportunity to train students in some area of information processing. Departments that do not have immediate access to sophisticated equipment, other than typewriters, can also educate students in business computer applications. Business students should at least be introduced to computer and information processing terminology and processing procedures.

The functional design of this guide is to assist the business teacher in implementing the use of the computer in the various subject areas presently taught. In addition, the committee suggests four general areas for business computer courses. An individual school system may choose to implement any one or all of these areas in the business education curriculum. The committee recommends that General Introduction to Computers be a prerequisite to any of the other three courses. The remaining areas should be developed in such a way that course sequence is not important. The areas suggested are as follows:

General Introduction to Computers
Business Computer Applications
Information Processing (Data and Word)
Computer Programming

# RECOMMENDATIONS FOR PURCHASE OF EQUIPMENT

The purchase of hardware (computers and peripherals) is the last of many decisions that must be made by the administrator. The committee recommends that the following points be considered before introducing computers to the business department:

1. Are computers to be used to teach a course in computers or as an enhancement to the current curriculum? If a computer laboratory is to be established for the teaching of a computer class, no more than two students should be assigned to one work station. A network will allow transfer of programs so that one printer will be sufficient for several computers. If the computer is to be used in computer-assisted instruction, a school may begin with one or two computers to be used on a rotation basis or for demonstration purposes. The teacher should be involved in the decision-making process in determining the need for equipment. This involvement will result in more effective use of the equipment.
2. Who is going to use the computer in the classroom? Do not surprise a teacher with a computer when he/she returns to school in the fall. This is a completely new challenge for teachers and will require extra preparation time. A

conference with the business faculty will reveal a teacher who is eager to accept the challenge.

3. Which is more important--service or software? This question must be answered on an individual basis. However, it must be remembered that downtime will reduce the value of a computer in the classroom and that a computer without the necessary software is useless. The committee recommends that software and service be considered ahead of hardware.

4. What kind of training is provided and what kind of on-going assistance is available for the teacher? If the company offers no special services for the instructor, an administrator would be wise to look elsewhere. Many companies offer special training free of charge for teachers. These companies will also provide assistance for specific problems encountered by the teachers. Some companies also have toll free (800) telephone numbers available. These are invaluable and very necessary services.

5. Finally, what equipment will be purchased? At this point the criteria for the purchase of computers have been established. The choice of software and the decision on how and where the computers are to be used will dictate the memory required. Many commercial programs require at least one disk drive and a minimum of 32K memory. (The committee recommends 48K with two disk drives.) The final decision on equipment should allow

for expansion of needs and uses. Some of the peripherals to be considered are as follows:

a. Disk Drives
b. Printers
c. Network

Some peripheral devices are essential for almost any business application while the procurement of others should be dependent upon how the computers are to be used.

For input and storage purposes, the committee recommends the purchase of disk drives. A minimum of two computers should have double disk drives. Some brands will have built-in drives; others will have external drives and may be transferable. Cassette recorders may also be used for the same purposes; however, most of the better quality, business-oriented software programs are recorded on diskettes rather than on cassette tapes. In addition, a disk system processes data at a much faster rate of speed and allows for more storage.

A network is invaluable for a computer laboratory. It connects all computers together using one as the control computer. This allows the teacher to load most programs on the control unit and transfer to all other computers to be run by the students. Some commercial programs require a disk for each computer and cannot be loaded through the network. The network also allows a remote computer to transfer to the control computer to save a program on a disk or to print the results of a program. This makes it possible to use one printer with many computers. An optional device is available that will connect two computers to one printer. If computers are used as word processors where much printing is required, this arrangement may be preferred to a network.

Printers may be classified as dot matrix or solid-line (daisy-wheel) printers. The solid-line printers are more expensive, and unless letter quality print is desired, the dot matrix printer is satisfactory. There is also a choice of 80 to 132 character printers for classroom purposes. Again, the need should determine the size chosen. It is important that the printer purchased be compatible with the computer. In some instances an enterface, which is an additional cost, is required to use a printer.

## BASIC OPERATION OF EQUIPMENT

The operational procedures for each particular brand of hardware varies with the manufacturer of the equipment. Above all, READ THE MANUALS PROVIDED WITH YOUR MACHINE FIRST.

The following are some ideas that should be considered in caring for and using most computer hardware (equipment) and software:

1. If appropriate, review and discuss with the students the proper care of diskettes and cassettes.
2. Protect the equipment from chalk dust and other particles by using dust covers. If possible, replace the chalkboard with ceramic marking boards.
3. Eating and drinking should be prohibited in the computer room.
4. Load diskettes or cassettes and turn on the equipment in the proper sequence (refer to equipment manual).
5. Instruct the students not to strike the keys too hard. The microcomputer chips are in the keyboard and are very sensitive.
6. Whether using cassettes or diskettes, the unit should be kept clean. Cleaner tapes and diskettes may be purchased for this purpose. (Refer to equipment manual.)
7. In some schools the equipment is connected to receptacles that are not controlled by a master (wall) switch. Discuss the importance of not turning off the switches while students are using the computers. A small sign placed next to the switch will serve as a reminder.

# USING THE BUSINESS COMPUTER APPLICATIONS GUIDE

This guide is not intended to be a complete guide in any instructional area. It is designed to be used as a supplement to aid the teacher in exposing the students to business computer applications. The guide is divided into three areas: general applications, accounting applications, and word processing.

Most of the activities listed will require the use of microcomputers; however, many can be used to introduce students to computers without actually using them in the classroom. Several of the activities may be used in more than one subject area. For example, the word scramble program may be used in any subject area as a vocabulary drill simply by changing the data statements.

The Appendix contains a selection of simple computer programs that can be keyed into the computer.

# General Applications

## GENERAL APPLICATIONS

GOAL: To provide business students with activities that will assist them in developing the computer related skills and understandings necessary for occupational as well as personal achievement.

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| I. Bank Reconciliation | |
| A. Terminology<br>1. Outstanding checks<br>2. Outstanding deposits (deposits in transit)<br>3. Service charge | understand the vocabulary necessary to reconcile a bank statement. |
| B. Reconciliation Procedures | possess a working knowledge of the procedures for reconciling a bank statement.<br>demonstrate the ability to use the computer to reconcile bank statements. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Prepare a handout containing vocabulary related to reconciling bank statements for students to complete. | Administer an objective, teacher-made test covering terminology. |
| Present terms to the students using a transparency of a bank statement. | |
| Review vocabulary terms using a crossword puzzle. | |
| Prepare statements with key words omitted. Fill in blank with words found in a "word find" exercise. | |
| Instruct students to work sample reconciliation problems. | Evaluate completed bank reconciliation problems using selected check points and balance. |
| Have students input data into a computer program to reconcile a bank statement. Refer to the Appendix for a Bank Reconciliation Program. | Check completed bank reconciliation for the proper results. |
| Conduct a field trip to a bank to observe computer use and processing of checks. | |
| Collect forms used in bank reconciliation and create a bulletin board display. | |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| I. Career Opportunities | |
| A. Trends in Work Force | perceive the major occupational groups and be able to give examples of the types of jobs included in each group.<br>understand current trends in the labor force.<br>realize the widespread use of computers in all career fields.<br>observe the changing roles of women in the labor force. |
| B. Education and Skill Level Required | realize the importance of an education in obtaining and keeping a job as well as insuring upward mobility. |
| II. Career Planning | |
| A. Self-Assessment | understand that independence, achievement, authority, helpfulness, security, and learning influence job performance. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Assist students in securing information on the number of workers needed in each occupational area for the year 2000. Using a program that produces a graph, have the students key this data into the program and answer questions about the output. A program is listed in the Appendix for this purpose. | Judge the computer output on the programs dealing with occupational trends and lifetime incomes. There will be a screen display of the number of questions answered correctly. |
| Direct students to create a bulletin board display of Oklahoma's top career fields and a listing of computer applications for each occupation. | Evaluate bulletin board. |
| Arrange a field trip to a large business to observe the use of the computer as an aid in different jobs. | Evaluate by having the students prepare a list of computer uses. |
| Invite people from several different career fields to speak about the applications of the computer in accomplishing their work. | Score student participation during question session after speaker presentation. |
| Show film or filmstrip on Computer Careers to the students. | |
| Direct students in conducting a word search containing computer occupations. | Grade word search for bonus points. |
| Apply a computer-generated quiz on statements about women and work. A program is listed in the Appendix for this purpose. | |
| Illustrate the lifetime income for people with various levels of education by using the computer to print a bar graph. Have students compute the average annual income if a person's working life is 45 years by using the information from the graph. A program is listed in the Appendix for this purpose. | |
| Direct the class in taking a self-survey on the computer consisting of questions dealing with various situations in life. This survey measures the answers given and ranks values for each student in order of importance. A program is listed in the Appendix for this purpose. | Check the output of the computer programs dealing with values, work factors, course descriptions, and scheduling. |
| Initiate a survey of the students in the business classes on work factors considered essential for happiness in future careers. Have students key the results into a program that will print the factors in order of importance with percentages. | |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| B. High School Courses | identify those high school courses that will help in preparation for specific jobs. |
| C. Positive Work Habits | be aware of the need for certain qualities in successful careers. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Use a computer program to list course descriptions. Have students key in their occupational interests and obtain a listing of high school courses essential for that career. | |
| Discuss with the class the relationship of various courses to occupations. | |
| Instruct each student to key into a computer program his/her grade level. The computer will print the courses required and electives available for that grade level. The student will use the computer output to plan his/her schedule for the remaining years of high school. A program is listed in the Appendix for this purpose. | |
| Invite the computer programming instructor to discuss the course content. | |
| Discuss qualities that contribute to success on the job. This would include accuracy, efficient use of time, communication skills, numerical ability, abstract reasoning, etc. Have students rate themselves on the qualities listed and enter their ratings (from 1-5) into the computer. The computer will print out a polygonal chart. | Appraise student participation in class discussion.<br>Evaluate computer screen display of the program that rates qualities and the program that lists the value of student's time in hours and minutes. |
| Have each student use the computer to calculate what his/her time is worth in hours and minutes using his/her salary. Stress the importance of efficient use of time. A program is listed in the Appendix for this purpose. | |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| I. Change Making | demonstrate the ability to accurately figure and return proper change to customers. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Utilize inexpensive commercial programs to provide drills on change making. This could be incorporated into business mathematics, general business, consumer education, office practice, or business machines class. Students in a computer class could be asked to write simple programs on change making. A change-making program is included in the Appendix. | Judge program or use teacher-made objective test. |
| Arrange a field trip to a shopping area to compare various types of cash registers, especially computerized cash registers. | Evaluate student participation. |
| Invite a cash register representative to show and demonstrate registers in the classroom. | |
| Request that students prepare questions to facilitate discussion during demonstration. | |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| I. Credit | |
| A. Credit Application | comprehend the basis on which a seller will evaluate an applicant before deciding to allow credit. |
| B. Sources for Loans<br>1. Banks<br>2. Savings and Loan Associations<br>3. Credit Unions<br>4. Consumer Finance Companies<br>5. Life Insurance Companies | identify the sources of consumer loans and be able to explain the basic differences. |
| C. Interest Computation on Installment and Non-Installment Loans | understand how interest is calculated on loans, and what effect different rates of interest and different lengths of time would have on the amount of interest to be paid. |
| D. Credit Cards | realize that credit card usage is widespread, and that annual family income has some effect on credit card usage (as income goes up so does usage). |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Utilize a computer program to rate students' current qualifications for a loan by having them answer questions pertaining to credit capacity. | Observe output of the computer and discuss findings while using the program. |
| Ask each student to decide whether each part of a credit applicatipn helps to judge the applicants character, capacity, or capital. Use a computer program which will tell the student how many questions were answered correctly. A program is listed in the Appendix for this purpose. | Evaluate by computer printout of number of correct answers. |
| Locate a store in your community that offers charge accounts. Invite the manager to visit class and explain the reasons for extending credit, how uncollectable accounts affect the cost of credit, and the way computers are used to handle credit accounts, i.e., statements. | Evaluate by class discussion after presentation. |
| Conduct a lesson where the students will read the characteristics of different credit sources such as payment terms, cost of credit, and yearly percentage rate. Try to match the characteristics to the credit source being described. Show possible answers on the screen during the quiz. A program is listed in the Appendix for this purpose. | Rate students' credit sources after working with computer program. |
| Initiate a class discussion of the effect of different rates of interest and different lengths of time on the amount of interest. | |
| Show the students how to enter data into the computer to figure interest on single payment loans. Use different rates of interest to emphasize the effect the interest rate has on the amount of interest to be paid. Then have the students enter different lengths of time to observe how it would affect the amount of interest to be paid. A program is listed in the Appendix for this purpose. | |
| Drill students on figuring interest using a series of computer generated problems. Students must work the problem given by the computer and key in their answer. A printout will be made of the number of correct answers. A program is listed in the Appendix for this purpose. | Evaluate by using the computer printout to determine the number of correct answers. |
| View a table on the computer of the percentage of families that use credit cards. Study the table and answer questions produced by the computer. A program is listed in the Appendix for this purpose. | |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
|  | The student(s) will: |
| E. Trends in Credit Usage | Recognize the trend of increased use of consumer credit in buying nonessential items. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Display a table on the computer to show the amount of consumer credit outstanding for the years 1975-1980. Have the students answer questions after studying the graph. A printout of correct answers can be made. A program is listed in the Appendix for this purpose. | Determine by computer printout the number of correct answers. |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| I. Commissions | |
| A. Salary Plus Commission on Total Sales<br>B. Salary Plus Commission on Sales Over a Quota<br>C. Straight Commission<br>D. Graduated Commission | determine various methods in which a salesperson's income may be calculated and be able to perform these calculations accurately. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Explain to the class the methods of calculation. Discuss the advantages and disadvantages of the different methods. | |
| Assign a student worksheet to be completed that will calculate gross pay using the various methods. | |
| Direct students in the running of a program to input data required to calculate and display commission income for salespersons. A program is listed in the Appendix for this purpose. | Administer computer test covering various methods of calculating commission income. |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| I. Data Entry Drills | |
| A. Use of 10-Key Keyboard | understand how to use the 10-key keyboard to enter data that is primarily numeric. |
| B. Use of Numeric Keys on Typewriter Keyboard | demonstrate a proficiency in using the typewriter keyboard to enter alphanumeric data. |
| C. Acquantance with Special Computer Keys | understand the location and use of special computer keys. |
| D. Review of Alphabetic Characters | demonstrate a competency on the alphabetic keyboard. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Utilize commercial software for 10-key keyboard drill. Most programs will measure and display accuracy and speed. Also, a choice of activities will be allowed. | Use self-evaluation or program evaluation. |
| Observe that there are inexpensive math drill programs available for use in this unit. An elementary level program would allow students to concentrate on the operation of the computer rather than on the difficulty of the problem. | |
| Ask students in a programming class to write simple math drills as an assignment. The better programs could be used by other business students to learn to use the computer. | |
| Utilize programs that are available through some textbook companies to provide drills for alphanumeric data entry. These disks will usually provide some form of measurement. | |
| Assign sentences from a typewriting textbook that will include both alphabetic and numeric characters. Restrict this practice to the typewriter keyboard. | Observe students. |
| Utilize tutorial programs that are available to introduce and teach the special computer keys on the keyboard. | Use self-evalution or teacher observation. |
| Make a transparency of the keyboard to explain the position and use of each special key. | Test on special keys. |
| Prepare a handout sheet of the keyboard. The special keyboard keys should be identified with a highlight pen. | |
| Furnish a handout sheet of a list of the special keys and how they are used. This list may be found in the Reference Manual. | |
| Provide students with simple review material from a typewriting textbook to be completed on their own time. This activity should be limited to the students who need keyboard review. If computer time is at a premium, this could be acccmplished on a typewriter. | Evaluate improvement. |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| II. Keyboarding | develop proficiency in keying-in computer programs. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Require students to key in programs selected by the teacher for use in business applications. Suggested programs would be those found in the Appendix of this guide. | Observe programs to see if they run correctly. |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| I. Depreciation | |
| A. Terminology | understand the concept of depreciation and related terminology. |
| B. Depreciation Computation Methods | demonstrate the ability to compute depreciation on the microcomputer. |
| 1. Straight line<br>2. Declining balance<br>3. Sum of years digits | |
| 4. ACRS (Accelerated Cost Recovery System)<br>5. Units Produced | understand how to interpret and compare the different methods of depreciation. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Prepare students by giving them a handout sheet of depreciation terminology and a brief explanation of the five methods to be used. Information concerning the ACRS method can be found in Federal Tax Publication Number 17. | Test on terminology. |
| Ask students to work problems first by hand and then on the computers. A program is provided in the Appendix that can be used for this activity. | Administer a computer test by using the program to produce correct results from a depreciation problem. |
| Read and compare printouts for tax advantages. | Test by having students relate a comparison among two or more of the methods studied. |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
|  | The student(s) will: |
| I. Economics |  |
| A. Inflation | understand the impact of inflation on the consumer, business, and government. |
| B. Gross National Product | recognize the four component parts of GNP and be able to calculate GNP. |
| C. Foreign Exchange | comprehend how to use the exchange rate to convert foreign currency into equivalent American dollar values. |
| D. Income: Gross, Net, Real | understand the relationship among gross income, net income, and real income. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Refer to the inflation program listed in the Appendix. This program, or one of the teacher's choice, may be used to demonstrate the effect of inflation on the consumer, business, and government. Choose items such as a hamburger, a pair of name-brand tennis shoes, an automobile, a home, etc., as input for the program. Prices may be chosen from the cost of equipment or the cost of items of merchandise to reflect the impact of inflation on business. This will explain the reason for the repricing of merchandise on the shelf. To relate the concept to government, the price of a rifle, plane, submarine, etc., could be used. | Grade answer sheets for the price of specific items on specific years. |
| Conduct a class discussion or lecture covering the four component parts of Gross National Product which will precede the computer application of the formula. The formula, C + I + F + G = GNP, is composed of consumer expenditures, private investment, foreign exports, and government expenditures. Library research to obtain the figures should be brought to class and keyed into the computer. This will demonstrate the use of the computer as a calculator--no program is necessary. This is accomplished on most computers with a simple print statement without a line number. | Score based on library research and teacher observation of student's ability to operate the computer as a calculator. |
| Prepare a chart with the assistance of the students listing the foreign exchange rate for a five-day period for several currencies. Selecting the exchange rates for one day, the students will input the information to run the simple program in the Appendix to display the equivalent value of American dollars in foreign currency. | Evaluate the foreign exchange chart and the equivalent value of American dollars as shown by the computer. |
| Coordinate the computer science and economics classes so that the computer students write the programs and the economic students collect the data to be used in the development of graphs to illustrate a comparison of gross, net, and real income. When the assignments are completed the classes will be combined to view the results on the computer. | Observe students. |
| Provide computer graphs to display supply and demand, competition, government spending, unemployment, and any other area applicable. | |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| I. English Usage | |
| A. Grammar | demonstrate knowledge of correct grammar by identifying different parts of speech, agreement of noun with verb, and similar word distinctions. |
| B. Punctuation | understand how to use commas correctly. |
| C. Spelling | recognize the correct spelling of commonly misspelled words. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Display the rules on the proper usage of words students commonly have problems with such as to, too, two; their, there, etc. Have the student select the proper word for use in a sentence. The computer will print the number of sentences answered correctly. | Check the computer printout to determine the number of sentences completed correctly. |
| Conduct a computer drill on verb and subject agreement. Allow students to enter the proper verb into a sentence. The computer will count and print out the number of correct answers. | Administer a quiz over the information learned or use the computer printout to determine the number of questions answered correctly. |
| Utilize a commercially prepared program for word processing. Allow students to compose and type business letters, themes, and reports using the computer. | Evaluate letters, themes, and reports created by students. |
| Teach the proper way to punctuate with commas incorporating the rules used in Shorthand. Have students input commas into practice sentences, and have the computer print out how many correct answers they have given on their practice drill. | Evaluate success students have with the drill by noting how many correct answers they have given, and observe the use of the comma in sentences. |
| Utilize a spelling drill on the computer to list the most commonly misspelled business terms. The computer will list all words missed so the students can study them and redo the drill at a later time. | Check computer listing of the words misspelled. |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| I. Income Tax Justification | understand how income tax revenue is used to finance various programs and projects and develop an appreciation for the need for income taxes. |
| A. Terminology and Documents | achieve an understanding of income tax terminology and documents, e.g., W-2, W-4 statements, exemptions, deductions, tax tables, personal income tax returns, etc. . |
| B. Payroll Deductions | comprehend how to use a computer to determine income tax payroll deductions. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Utilize a pie chart to show how federal revenue is spent. | Evaluate student attentiveness and participation in class discussion and other activities. |
| Discuss the pros and cons of income taxes. The following is an example:<br>What would life in the United States be like if we did not have income taxes? | |
| Request the students to collect income tax forms from various sources to be used in class discussion and in the preparation of a bulletin board. | |
| Obtain the "Understanding Taxes" packet from the Internal Revenue. Discuss federal income taxes using the giant forms contained in the packet. This packet also has excellent workbook assignments. | Grade the "Understanding Taxes" workbook assignments. |
| Assign exercises that require students to determine income tax payroll deductions using a microcomputer. | Evaluate printouts or video displays of work completed on the microcomputer. |
| Invite a representative of a local firm that uses a computer to process payroll deductions and to discuss payroll procedures. | |
| Use the programs listed in the Appendix to determine gross pay and net pay. Deductions are figured on a percentage basis to avoid a complicated program. | |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| C. Compiling and Computing Tax-Related Data | develop a comprehension of the procedures for using a microcomputer to compile and compute income tax data. |
| D. Filing a Return | understand how to complete an income tax return (short or long form) for an individual. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Utilize the "Understanding Taxes" packet to introduce income tax computations. | Administer an objective quiz covering income tax terminology, documents, and payroll deductions. |
| Observe that a variety of commercially produced income tax programs are available. Some programs are recorded on diskettes or cassettes while others are in book form and must be keyed into the computer. The other alternative is to write your own program. Once a program has been keyed into the computer it can be stored on a diskette or cassette for future use. | Use a problem style quiz that requires the student to complete an income tax return (short form) using information provided by the teacher (blank forms are available during tax season at local banks or post offices). |
| Note that when shopping for a commercially produced program that it is important to remember that some programs are more inclusive than others. | |
| Demonstrate the running of the income tax program(s) before making hands-on assignment. | |
| Observe that when instruction sheets or step-by-step manuals are not provided by the producer of the program(s), it may be necessary to prepare a set of instructions for the students to follow. | |
| Complete assignments that require the students to compile and compute income tax-related data using a microcomputer. | |
| Allow students to fill out their own short forms for extra credit. Also encourage them to help others. | Evaluate the completed tax form. |
| Make use of commercially produced software program(s) that are designed to aid in the compiling and computing of income tax data. | |
| Require the students to use the microcomputer to compile and compute their own personal income tax data (either actual or presumed). This is a good opportunity for the students to use the data compiled and tabulated on the computer to complete actual income tax returns. | Evaluate the completed tax form. |
| Discuss the advantages and disadvantages of using a computer to process income tax data. | |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| I. Insurance | |
| A. Insurance terminology | comprehend commonly used insurance terms. |
| B. Car Insurance | realize that automobile insurance policies should be analyzed carefully to determine the coverages, the limitations of protection, and how they are applied in specific cases. |
| | understand the types of automobile accidents that occur and the factors contributing to accidents. |
| | recognize the steps to take after being involved in an automobile accident. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Pretest on facts about insurance using a computer program to ask questions and print out the number of correct answers. | Teacher observation of computer printout and listing of number of correct answers. |
| Play word scramble with the computer using insurance terms. A program is listed in the Appendix for this purpose. | |
| Display a case study accident on the computer. After studying the information about the accident the students must determine what insurance payments were made and key them into the computer. The computer will print the number of correct answers. A program is listed in the Appendix for this purpose. | |
| Implement a program to determine the percentage of accidents by age groups as follows: 16-25, 26-35, 36-45, 46-55, 56-65, and over 65. The program will print the different age groups, and the students will enter the number of accidents for that particular group. A program is listed in the Appendix for this purpose. | |
| Require students to key in the name of two intersections and the number of accidents at each intersection. The computer will compare the rate of accidents at the two different intersections in any locale. A program is listed in the Appendix for this purpose. | |
| Compute the occurrence of traffic deaths in which the driver was operating a vehicle while under the influence of alcohol to the occurrence of traffic deaths in which alcohol was not a factor. A program is listed in the Appendix for this purpose. | |
| Display a list of terms on the computer screen. Have the students fill in sentences with their choice of terms from the display. This program would be designed to educate the students in the proper steps to take after being involved in an automobile accident. A program is listed in the Appendix for this purpose. | |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| C. Life and Health Insurance | become aware of the amount consumers spend for health care and the percent of cost covered by insurance. |
| | perceive the relationship that exists between life insurance coverage and disposable personal income. |
| D. Home and Property Insurance | understand what information is necessary to support a claim for losses on property. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Ask students to key answers into the computer after studying a table showing the total amount consumers spend for health care and the percent covered by insurance. The computer will show the number of correct answers. A program is listed in the Appendix for this purpose. | |
| Show a graph on the computer to illustrate the relationship between life insurance coverage and disposable personal income. Have students study the graph and answer questions. The number of correct answers will be displayed on the computer screen. | |
| Conduct an inventory of student's personal possessions and key it into a computer program. Allow each student to obtain a printout to keep as a record for insurance purposes. Also, each student can do a household inventory for his/her family at this time. | |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| I. Inventory | |
| A. Types of Inventories | understand the difference between physical and perpetual inventories. |
| 1. Physical inventory | |
| 2. Perpetual inventory | recognize the need for taking a periodic physical inventory to prove the accuracy of a perpetual inventory. |
| | understand that many merchandising businesses today keep a perpetual inventory through the use of computerized cash registers. |
| | demonstrate the decision-making skill for choosing the proper method for evaluating inventory. |
| B. Pricing Methods | |
| 1. FIFO methods<br>2. LIFO methods | comprehend LIFO and FIFO methods of determining inventory values and the reasons for the different methods. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Conduct a class discussion of the meaning of inventory terms. Discuss the innovative methods of keeping perpetual inventory, such as computerized cash registers and the scanners for reading prices and price codes, e.g., registers that record the price of an item through the use of a scanner, which reads for inventory use only. | Use a teacher-prepared objective test. |
| Obtain inventory forms from a local business (computer printouts, stock record cards, inventory record sheets, punched cards, etc.). Have the students use the forms in preparing a bulletin board. | Award bonus points for bulletin board display. |
| Invite a representative of a large retail store or chain to discuss automated inventory procedures. | |
| Prepare for a field trip or speaker by having students compile a list of questions to facilitate discussion. | |
| Discuss with the students how fast food chain stores are tied into home office computers. Conduct a field trip to the site or invite a speaker from the business. Inventory loss from spoilage or theft should be covered. | |
| Permit the students to enter data to run the program in the Appendix figuring cost of merchandise sold. | Grade the results of the computer printout. |
| Ask the computer class to write a program displaying the effect of LIFO (Last-in, First-Out) and FIFO (First-in, First-out) methods of pricing inventory in the form of a chart. The following is an example of a chart: | |

Purchase Prices

| January | April | September | December |
|---|---|---|---|
| Balance<br>5 @ $40<br>per unit | 20<br>$42 per<br>unit | 60<br>$44 per<br>unit | 40<br>$47 per<br>unit |

Ending inventory 5 units

| FIFO | LIFO |
|---|---|
| 4 @ $47<br>1 @ $44 | 5 @ $40 |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| I. Invoices | |
| | recognize the various forms of invoices and understand the purpose of an invoice. |
| | understand how to key information into the computer to properly prepare invoices. |
| II. Discounts | |
| A. Discount Dates<br>B. Trade Discounts<br>C. Chain Discounts | identify and be able to compute trade, chain, and cash discounts. |
| D. Cash Discounts<br>E. Net Amounts | understand the terms of an invoice and be able to compute the discount rate and the net amount. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Request students to bring sample copies of any invoices available through their jobs or their parents' businesses. These may be used for a bulletin board display. | Give extra credit for sample invoices. |
| Ask students in a programming class to write a simple program that will accept data, compute extensions, accumulate totals, and print invoices. The form may be printed on plain computer paper rather than special invoice forms. | Evaluate students on the basis of correct invoice totals. |
| Conduct a class discussion and explanation of trade, chain, and cash discounts. | |
| Assign drill problems to be worked by hand or calculator to determine dates, trade, chain, and cash discounts. | |
| Conduct a contest between students for speed of computation. | Evaluate by assigning bonus points for winning students. |
| Utilize the same drill problems to key into the computer to prove the accuracy of prior work. A program is listed in the Appendix for this purpose. To keep the program as simple as possible, the discount date of your invoices must be kept in the same month as the invoice date. | Use a computer test for computation of invoice discount dates, discounts, and net amounts. |

Review the following methods of presenting chain discounts with the students:

$100 @ 15/10/5

| Method 1 | Method 2 | Method 3 |
|---|---|---|
| 100 | 100 | 100 x |
| x .15 | x .85 | .85 x |
| 15.00 | | .90 x |
| 100.00 | | .95 = |
| -15.00 | | |
| 85.00 | 85.00 | |
| x .10 | x .90 | |
| 8.5000 | | |
| 85.00 | | |
| - 8.50 | | |
| 76.50 | 76.50 | |
| x .05 | x .95 | |
| 3.8250 | | |
| 76.50 | | |
| - 3.83 | | |
| 72.67 | 72.6750 | 72.68 |

Method 4. Have students work the problems on the computer keying in data. This may be done on the computer with a print statement and no line number, utilizing only the calculating capacity of the computer.

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| I. Legal Applications | develop a knowledge of law vocabulary. |
| | realize that many changes have been brought about in the area of law and law enforcement as a result of the computer revolution. |
| | develop an awareness of the practical applications of the computer in today's society for the entire student body. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Assign a vocabulary drill on the computer. This may be a coordinated effort between the law class and the programming class. The law class will be responsible for the terms and the programming class will write the drill program. The law class will use the program to study and self-test knowledge of terms. | Measure using an objective vocabulary test. |
| Obtain a commercial test-writing program to list short case studies for the students to use as computer assisted instruction. | |
| Conduct a field trip to a local police station to view the use of computers in law enforcement. | Evaluate by using teacher observation or a checklist completed by the student during the field trip. |
| Invite a lawyer to speak to the class concerning the new developments in the field of law that is related to computers. | |
| Initiate a coordinated effort involving the law class, the programming class, and the student council to conduct a school election allowing students to vote on the computer. The program should tally the votes, declare a winner, and show the percentages. | |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| I. Marketing Applications | |
| A. Planning and Decision Making | develop an understanding of the procedures followed in making decisions concerning the marketing of a product. |
| 1. Promotion<br>2. Production planning<br>3. Pricing | |
| a. Markups | understand how to manually compute markups and markdowns. |
| 1. Based on cost<br>2. Based on selling price | comprehend how to use a microcomputer to compute markups based on cost and on selling price. |
| b. Markdowns (based on selling price) | develop the ability to use a microcomputer to calculate markdowns based on selling price. |
| 4. Distribution | |
| B. Cost and Sales Analyses | understand the need for conducting cost and sales analyses. |
| 1. Percent of increase or decrease | attain the ability to manually calculate the percent of increase or decrease in product cost and/or sales. |
| | understand how to use a microcomputer to calculate the percent of increase or decrease in product cost and/or sales. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Discuss the importance of making thoughtful decisions concerning the marketing of a product. | Measure student attentiveness and participation in class discussion. |
| Lead the class in a discussion of some of the factors that should be considered in making decisions concerning the promotion, production, planning, pricing, and distribution of a product. | |
| Utilize commercially produced marketing simulation software programs (learning games) that require the students to make marketing decisions. | Administer a problem style quiz that requires the students to manually compute markups and markdowns. |
| Discuss the mathematical computations necessary to manually determine markups based on cost and selling price and markdowns based on selling price. | |
| Make use of the software programs that are available in the Appendix. These programs are designed to aid in the computation of markups and markdowns. | Evaluate computer printouts or video displays of the "hands on" markup and markdown exercises. |
| Ask the students to collect current retail price and retailer's cost information concerning various products. They can use the collected data along with teacher-provided percentages to calculate markups and markdowns on the microcomputer. A program is listed in the Appendix for this purpose. | |
| Discuss how cost and sales analyses aid in management decision making. | Appraise student attentiveness and participation in class discussion. |
| Lead the class in a discussion of some of the factors that effect increases and decreases in costs and sales. | |
| Invite a resource person from the marketing department of a local business to discuss the importance of and the procedures for conducting cost and sales analyses. | |
| Demonstrate on the chalkboard or overhead the mathematical computations necessary to determine the percent of increase or decrease in product cost and/or sales. | Administer a problem style quiz covering mathematical computations related to increases and decreases in product costs and sales. |
| Obtain a software program that is designed to compute the percent of increase or decrease in product cost and/or sales using a microcomputer. A program is listed in the Appendix for this purpose. | |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| C. Graphic Representation | comprehend how graphics may be used to represent financial data (bar graphs, line graphs, pie charts, etc.). |
| | understand the procedures for using a graphics software program to represent cost and sales data on a microcomputer. |

## ACTIVITIES

Direct the students in how to use a microcomputer to complete a teacher prepared cost and sales analyses assignment sheet. The following is an example:

SALES CHART

| January | February | March | April | May |
|---|---|---|---|---|
| $4800.00 | $5200.00 | $5100.00 | $5150.00 | $4700.00 |

Compute the precent of increase or decrease in sales from January to February. (Use (+) to indicate increase or a (-) to indicate decrease.)

Utilize a computer printout and/or textbook illustration to explain how graphs and charts may be used to represent financial data.

Investigate the excellent graphics software programs on the market that may be incorporated to give students the opportunity to use a microcomputer to view cost and sales data in graphic form.

Select a graphics program to be used to represent other types of data. For example, the students may be given the opportunity to collect the necessary data and prepare a pie chart based on how the ideal school district spends its revenue. This would be an excellent group activity.

Assign students (individually or in groups) oral presentations using computer output of graphic data.

## EVALUATIONS

Appraise each student's performance in the oral presentations.

Check the computer printouts or video displays of data represented in graphic form.

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| I. Notes and Interest | |
| A. Terminology | understand the terminology related to notes and mortgages. |
| B. Interest Computation<br>1. Lump sum payment notes<br>2. Installment loans<br>3. Real estate mortgage loans | develop the ability to calculate simple interest and installment charges. |
| | understand how to run a computer program related to the unit. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Study terminology through a word game, crossword puzzle, handout list of definitions, or a computer word scramble. | Evaluate by giving a matching test covering terminology. |
| Assign simple interest problems to help students understand this concept. | Test on interest calculations. |
| Make a comparison of actual rates paid on a sum repaid in one payment or repaid in installments. | |
| Run a computer program to calculate simple interest and installment charges. Refer to the Appendix for a program that may be used. | Evaluate computer operations. |
| Run a program to amortize a real estate mortgage. This may be a demonstration because a 30-year loan will be a lengthy printout of 180 lines. A program is listed in the Appendix that may be used for this project. | |
| Conduct a field trip to a mortgage company, savings and loan, or bank to observe the computer activity in this area. | |
| Invite a guest speaker to discuss how computers have simplified the calculations necessary to prepare a schedule of payments. | |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| I. Payroll | |
| A. Terminology and Documents | develop an understanding of payroll terminology and documents. |
| B. Payroll Calculations<br>1. Gross pay<br>2. Deductions<br>3. Net pay | demonstrate the ability to perform payroll calculations. |
| C. Employer's Payroll Taxes<br>1. FICA<br>2. Federal Unemployment Taxes<br>3. State Unemployment Taxes | understand the reasons for Employer's Payroll Taxes and be able to perform the necessary computations. |
| D. Computer Applications<br>1. Create a master file<br>2. Payroll computations<br>3. Payroll records | comprehend the procedures and demonstrate the ability to create a master file, perform payroll computations, and produce payroll records using a microcomputer. |
| 4. Role of the computer in the business world | appreciate the role of the computer in processing payroll. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Review payroll terminology and documents using flashcards. | Administer an objective test covering terminology and related documents and payroll computations. |
| Refer the students to textbook illustrations and computer printouts when discussing payroll documents. | Evaluate student attentiveness and participation in class discussion. |
| Discuss and demonstrate the procedures for performing payroll calculations (Employee Income Tax, FICA, etc.) using tax tables and/or straight multiplication. The following is an example:<br>6.7% = .067   $200.00 Total Earnings<br>.067 FICA Tax Rate<br>$ 13.40 FICA Deduction | |
| Lead the class in a discussion of the purposes of Employer's Payroll Taxes. | |
| Utilize the overhead to review Employer's Payroll Tax computations with the class. | |
| Utilize the payroll related programs in the Appendix that can be keyed into some microcomputers. | |
| Demonstrate the operation of a payroll program before making related assignments to the students. This is very important. | |
| Prepare instruction sheets to guide the students through the loading and operation of a payroll program. | |
| Investigate commercially produced payroll programs that have been developed for the microcomputer for use in the classroom. | Evaluate the output (video display or printout) of the exercises completed by each student. |
| Assign payroll exercises that require the students to create a master file, input current payroll data, and produce related documents. | |
| Discuss the pros and cons of computer data processing of payroll vs. manual data processing upon completion of the "hands on" experience. | |
| Invite a resource person from the payroll department of a local firm to discuss payroll procedures with the class. | |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| I. Personal Money Management | |
| A. Importance of Money Management | develop an appreciation for the importance of good money management. |
| B. Budgeting | understand the role that budgets play in financial planning and be able to prepare a budget for an individual or a family using a microcomputer. |
| C. Income and Expense Records | comprehend the reason for and be able to prepare an income and expense record for an individual or family using a microcomputer. |

## ACTIVITIES

Conduct a field trip to the payroll department of a local business. Choose a business that uses a computer to process its payroll.

Discuss the problems that sometimes develop when savings and spending are not properly planned. Gather and present statistics related to individuals not being able to pay their bills (bankruptcy, foreclosures, repossessions, etc.).

Lead the class in a discussion of the important role that budgeting plays in financial planning.

Ask the students to collect current data related to amounts budgeted for various programs and projects by the local community government (streets and roads, police, fire, parks, etc.).

Investigate commercially produced software programs that are designed to aid in the preparation of a budget.

Direct each student in how to use a microcomputer to prepare a personal budget covering a period of one month.

Discuss the role of the income and expense record in keeping track of how money is being spent. Mention that the income and expense record can be used to help keep expenditures in accordance with the current budget and may also be used in the preparation of future budgets.

Obtain a commercially produced software program to give the students an opportunity to use a microcomputer to keep track of income and expenses.

Direct the students in using a microcomputer to complete an income and expense record utilizing teacher-prepared data that is relative to the "average high school student".

## EVALUATIONS

Evalute student attentiveness and participation in class discussion and other activities.

Determine the students' "hands-on" experiences by checking the printouts or video displays of the budget and the income and expense record assignments.

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
|  | The student(s) will: |
| I. Proration |  |
| A. Distribution of Total Amount | understand the principle of distributing a total amount on the basis of ratio. |
| B. Percentage Distribution | comprehend the principle of proportionate distribution of parts in relation to the total amount expressed as a percentage. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Assign proration problems in business mathematics or business machines class. Then apply the same problems in running a computer program to check the accuracy of the students' work and to make comparisons of time and effort involved in working the problems. There is a short program in the index that may be used for this activity. | Score problems worked.<br>Check work proration problems using the computer program. |
| Apply the same problems as the activity above (or different problems) to calculate percentage distribution of total amounts. If a pie chart or bar graph is desired, coordinate with the computer programming class to write a program to illustrate the proration on the computer. | |

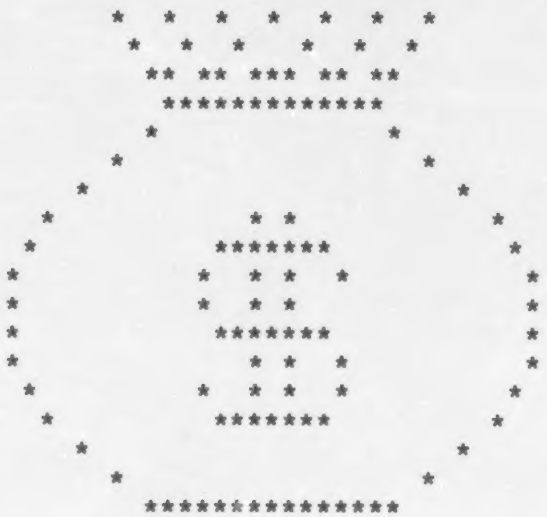
| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| I. Savings | |
| A. Savings Accounts | recognize the importance of saving and wise investment. |
| 1. Terminology | |
| 2. Institutions | understand the different types of savings and investment programs available. |
| a. Banks | |
| b. Savings and Loans | |
| c. Credit Unions | |
| 3. Types of accounts | |
| a. Passbook account | |
| b. NOW account | |
| c. Certificate of Deposit | |
| B. U. S. Savings Bonds | |
| C. Annuities | |
| 1. Tax-sheltered | |
| 2. Insurance annuities | |
| II. Investments | |
| A. Corporate Stocks and Bonds | comprehend how to compare the characteristics between corporate stocks and bonds |
| B. Real Estate | become aware of the advantages and disadvantages of investing in real estate. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Discuss savings and investments with the students. | Test (written or computer) on vocabulary. |
| Conduct a computer drill on vocabulary related to savings and investments. | |
| Utilize the computer program listed in the Appendix to demonstrate the advantages of multiple compounding. | Observe students. |
| Conduct a field trip to a bank or other type of savings institution to view the computer installation. | Evaluation by students of field trip. |
| Assign students to read a bar graph showing the growth of a fixed investment over a period of years at a set rate of interest. An example would be U. S. Savings Bonds. The graph should be keyed into the computer and the students allowed to run the program and fill in a worksheet as they read the graph. | Measure by using a worksheet. |
| Prepare a computer program with student input for gross pay and amount of monthly savings. The program will give output showing a comparison of take-home pay if the savings are tax-sheltered or regular savings. Have each student complete a worksheet covering the exercise. | |
| Chart the market performance of stocks and analyze the value of corporate bonds by using a commercial program. This may be used as a class project during a unit of study or extended over a longer period of time. Stock market simulation games can be purchased to increase interest in the study. | Evaluation of student's record of stock and the increase or decrease in value of his/her chosen stock.<br>Evaluate by teacher observation and student self-evaluation. |
| Conduct a field trip to a real estate office to view a demonstration on the use of the multi-list. | Observe students. |
| Run an amortization schedule on the computer to show the amount of interest to be paid on a piece of property over a 20-year period. Use this in a discussion on whether or not the property would be a wise investment. There is a program in the Appendix or commerical programs are available. | |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| C. Other Investments | realize there are other types of investments in addition to the more traditional ones listed above. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Ask students to research the price of gold over a set period of time, and key information into a computer to show the price fluctuations in graph form. This activity could be used to chart art, diamonds, oil royalty, etc. | Evaluation by teacher of student's completed worksheet showing results of investment or teacher evaluation of CRT results. |
| Ask students if they have any type of collections (stamps, coins, or books). Have them assess an approximate value on each collection. Discuss how these could or could not be investments. | |

# Accounting Applications



## ACCOUNTING APPLICATIONS

GOAL: The accounting student will comprehend the role of the computer in the business world and will attain the understandings and skills necessary to use a computer to process accounting data.

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| I. Introduction | |
| A. Role of The Microcomputer in The Business World | develop an understanding of the role of the microcomputer in the business world. |
| B. General Ledger Program | demonstrate knowledge of the uses and limitations of using a microcomputer to process general ledger data. |
| II. Microcomputer Processing of General Ledger Data | |
| A. Create a master file (set up accounts) | learn how to set up sub-groupings (categories) of reserve (income) and expense accounts. |
| | understand how to set up a general ledger by entering the name of the business, dates, account information, etc. |
| | demonstrate the ability to add or delete accounts, find specific accounts, and make necessary changes. |
| B. Produce a Trial Balance | understand how to produce a video-display or a printout of a trial balance or a list of accounts. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Discuss the many ways in which the microcomputer is used to process data (general ledger, payroll, financial documents, inventory control, word processing, real estate, etc.) | Evaluate student attentiveness and participation in class discussion. |
| Invite a representative of a computer company to visit the class to discuss the many uses of the microcomputer. | |
| Collect business oriented computer publications from various sources to be used in class discussion and in the preparation of a bulletin board. | |
| Discuss the uses and limitations of using a microcomputer to process general ledger data. For example, some general ledger programs will automatically close the ledger but will not provide a printout of the closing entries. | |
| Demonstrate to small groups of students (three to four students per demonstration) the operation of the general ledger program. | |
| Observe that most commercially produced general ledger program packages include a manual, a textbook, or instruction sheets. Some packages contain step-by-step learning exercises that include sample problem(s). If a general ledger package contains "learning exercises", it may be advantageous to have the students train on an individualized basis or in groups of two or three. | |
| Give the students a step-by-step demonstration of the procedure for setting up and maintaining a master file and producing a list of accounts or trial balances if learning exercises are not used. | Evaluate a video display or a printout of the list of accounts and/or the trial balance. |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| C. Posting Transactions | comprehend the procedures for posting a variety of business transactions (cash receipts and payments, purchases, sales, etc.) |
| D. List of Transactions | achieve the ability to instruct the computer to produce a list of transactions. |
| E. Adjusting Entries | understand how to post adjusting entries. |
| F. Financial Statements<br>Closing the Ledger | understand how to follow the proper sequence in doing a closing and in producing financial statements (monthly document reports, income statement, capital statement, and a balance sheet). |
| G. General Ledger Overview | appreciate the advantages of computer data processing over manual data processing in setting up and maintaining a general ledger.<br>develop an understanding of how businesses use other types of computers (mini-computers or mainframes) to process their general ledgers. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Use commercially produced or teacher prepared learning exercises to train students (on an individual basis) to use the microcomputer to post transactions and adjusting entries, close the ledger, and produce a list of transactions and financial documents. | Evaluate video displays or printouts of the list of transactions, adjusting entries, and the financial documents. |
| Give the students a step-by-step demonstration if learning exercises are not available. | |
| Lead the class in a discussion of the advantages of using a computer to process general ledger data. | |
| Conduct a field trip to a local business that uses a computer to keep track of its general ledger. | Measure student attentiveness and participation in the field trip and in class discussion. |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| I. Accounts Receivable | |
| A. Create Master Receivable File | achieve an understanding of a master receivable file and its relationship to the Accounts Receivable Ledger, and demonstrate the ability to create the file using a computer. |
| B. Entering Sales Invoices and Credit Memorandums (Sales Returns and Allowances) | interpret and enter sales invoices, credit memos, and cash receipts on account. |
| C. Inputting Cash Receipts on Account | |
| D. Producing a Schedule of Accounts Receivable | demonstrate the ability to use the microcomputer to prove the accuracy of accounts receivable with an accounts receivable schedule to produce monthly statements. |
| E. Printing Monthly Statements | |
| F. Collection Letters | understand how to compose and/or type effective letters using information processing equipment. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Review the relationship of an accounts receivable ledger to the general ledger controlling account using a chalkboard or overhead to demonstrate. | Use a teacher made objective quiz covering the first two activities. |

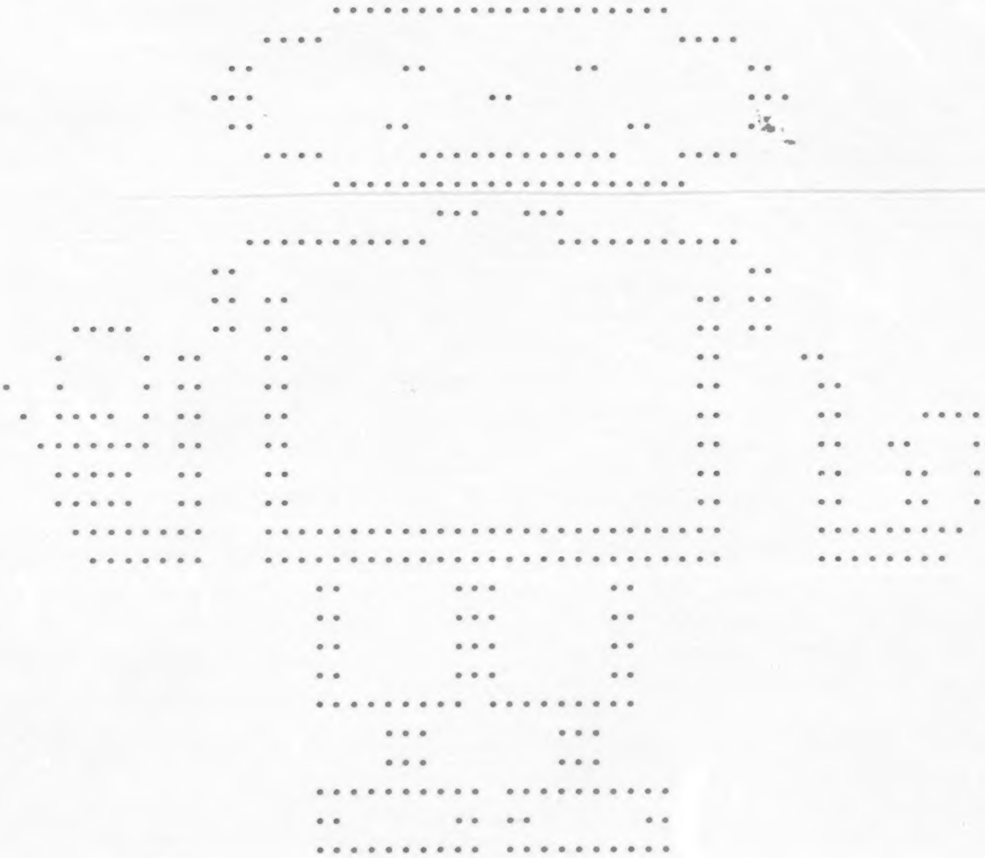
| GENERAL LEDGER | | ACCOUNTS RECEIVABLE LEDGER |
|---|---|---|
| Accounts Receivable | = | C. DATA |
| 110.00 | | 59.80 |
| | | P. CHIP |
| | | 37.20 |
| | | C. LOAD |
| | | 13.00 |

| | |
|---|---|
| Discuss the use of documents related to accounts receivable, e.g., sales invoice, credit memo, monthly statements, etc. Explain the relationship of these documents to the students. T accounts may be used to demonstrate this relationship. | |
| Collect relative documents from various businesses to be used in a bulletin board display. | Award extra credit based on student participation in bulletin board project. |
| Demonstrate the use of an accounts receivable computer program to the students. | Evaluate student attentiveness and participation in class discussion and activities. |
| Instruct students to use the training manual to learn the procedures for setting up and maintaining an accounts receivable ledger. The instructor should be available to help each student or group of students get started. Answer questions as the students proceed through the manual. It should be stressed that each student must carefully follow the manual without digressing. | Evaluate printouts resulting from the student's work with the accounts receivable program. |
| Incorporate the preceding activity into an accounting class if enough computers are available. The class can work through this simultaneously as a project. It is suggested that no more than two students be assigned to the same computer. If fewer computers are available, students may be rotated. A convenient time would be during the working of a simulation set. For example, each student could spend one week on the computer and three weeks completing the simulation set. | Administer a problem test that requires the student to work through the program using only two or three accounts receivable accounts and a limited number of transactions. |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| I. Accounts Payable | |
| A. Create Master Payable File | demonstrate an understanding of a master payable file and its relationship to the accounts payable ledger and be able to create the file using a microcomputer. |
| B. Entering Purchase Invoices | interpret and enter purchase invoices, debit memos, and payments on account. |
| C. Inputting Purchase Returns and Allowances | |
| D. Recording Payments on Account | |
| E. Producing a Schedule of Accounts Payable | demonstrate the ability to use a microcomputer to prove the accuracy of Accounts Payable with an Accounts Payable schedule and list invoices by due date. |
| F. Printing a List of Invoices By Due Date | |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Review the relationship of an account payable ledger to the general ledger controlling account using the chalkboard or overhead. | |
| GENERAL LEDGER<br>Accounts Payable<br>900.00<br><br>ACCOUNTS PAYABLE LEDGER<br>A. TRON<br>400.00<br>P. TROFF<br>200.00<br>C. SAVE<br>300.00 | |
| Discuss the use of documents related to accounts payable, e.g., purchase invoices, debit memos, check stubs, payments on account, etc. Review the relationship of these documents with the students. T accounts may be used to demonstrate this relationship. | |
| Request that the student collect documents from various businesses to be used in a bulletin board display. | Award extra credit based on student participation in bulletin board project. |
| Demonstrate the use of an accounts payable computer program to the class. | Evaluate student attentiveness and participation in class discussion and activities. |
| Utilize the training manual to learn the procedures for setting up and maintaining an accounts payable ledger. The instructor should be available to help each student or group of students get started. Answer questions as the students proceed through the manual. It should be stressed that each student must carefully follow the manual without digressing. | Evaluate printout resulting from the student's work with the accounts payable program. |
| Incorporate the preceding activity into an accounting class if enough computers are available. The class can work through this simultaneously as a project. It is suggested that no more than two students be assigned to the same computer. If fewer computers are available, students may be rotated. A convenient time would be during the working of a simulation set. For example, each student could spend one week on the computer and three weeks completing the simulation set. | Administer a problem test which requires the student to work through the program using only two or three accounts payable accounts and a limited number of transactions. |

# Word Processing



## WORD PROCESSING

GOAL: To provide student(s) with various learning activities to help them identify and achieve competencies necessary for on-the-job performance in the area of word processing in order to pursue a career in today's automated office.

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| I. Introduction to Word Processing | |
| A. A Word Processing System | develop an understanding of word processing concepts, terminology, and applications. |
| B. Career Opportunities | understand the career opportunities available in word processing from entry-level positions to supervisory and management positions. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Utilize a textbook to learn vocabulary. Prepare handouts of additional vocabulary from other sources, i.e., machine manuals. | Evaluate vocabulary. |
| Discuss business applications of word processing in government, service industries, medical, legal, insurance, manufacturing, retailing, and others. | Rate student participation. |
| Bring examples of letters and other documents produced on different types of word processing systems. Use bulletin board for display. | Grade student presentations. |
| Assign articles for students to read to make them aware of current trends in word processing. | Summarize article. |
| Provide filmstrips, film, video cassettes, learning audio cassettes, and software for microcomputers to illustrate applications. | |
| Consult the International Information Word Processing Association (IIWAP) for job titles and descriptions of career paths. Have students prepare bulletin boards. | Evaluate student bulletin boards. |
| Examine the Dictionary of Occupational Titles to learn about careers in word processing. Prepare written or oral reports. | Grade reports. |
| Consult the Department of Labor's Occupational Outlook Handbook for information on careers. | |
| Invite guest speakers involved with word processing careers to speak to the class. | Evaluate student's using a checklist. |
| Discuss the qualities word processing employers look for in prospective employees so the students will have a general idea of the personality traits needed as well as the general skills necessary for employment. Consider using microcomputer career software as a resource. | |
| Visit a traditional office and an office using automated equipment for comparisons and contrasts. | Evaluate participation of class discussions field trip. Use oral or written reports. |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
|  | The student(s) will: |
| C. Competency Skills for Word Processors | develop the competency skills needed to be a successful word processing operator. |
| D. Skills for The Automated Office | appreciate the activities that are designed to learn to be a word processing operator. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Conduct a follow-up study of former students to determine needs. | |
| Survey community to determine career opportunities. | |
| Develop a library of reference materials in the classroom that contain career opportunities. | |
| Consult counselors for publications on career opportunities in word processing for use by the students. | |
| Pretest students' spelling, grammar, punctuation, proofreading, and keyboarding skills to determine weaknesses. Use microcomputer software where possible. | Use pretest. |
| Consult a textbook and hand out materials giving students direct information on skills needed to be a successful word processor. | |
| Discuss with the students the importance of protecting confidential data. | |
| Provide several rush jobs for students to develop the ability to prioritize, e.g., letters, reports, and statements. | Evaluate student's ability to prioritize jobs. |
| Discuss with the students the need for certain competency skills and how to obtain them. | |
| Prepare a bulletin board illustrating different skills needed in an automated office, i.e., direct mailings, organizational yearbooks, reports, legal document forms (used repetitively), form letters, financial data, inventories, payrolls, newsletters, manuscript. | |
| Discuss with the students that since the field of microprocessing is virtually unlimited at this time, they can be creative in developing ways to use the equipment. | |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| II. Background for Development of Word Processing Basic Skills | |
| A. Personality and Human Relations Development | recognize and develop desirable personality traits and the ability to work successfully with others. |
| B. Business English | understand and utilize correct grammar and punctuation. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Stress development of successful work habits and personality traits in all workers, i.e., time management, application of automated capability, adaptability, flexibility, integrity, poise, cooperation, congeniality, pride in work, business ethics. | Test by having students develop an essay on desirable work habits and personality traits. |
| Discuss how job efficiency and productivity are affected by personal problems, i.e., stress, tension. | |
| Consult resource persons on productivity and share ideas gained with the class. | |
| Emphasize factors that lead to job success and promotion within a company, i.e., interest in learning new capabilities, individual responsibility, maturity. | |
| Discuss the effect of employee attitude on employee satisfaction and productivity. | |
| Utilize student activity guides and case study problems to reinforce discussion items. | Evaluate activity guides. |
| Ask each student to give an oral report on a person he/she feels has desirable personality traits. | Grade reports. |
| Prepare bulletin board displays on desirable personality traits and how to work with others. | |
| Discuss with the class correct grammar rules and punctuation. | Test on grammar and punctuation. |
| Obtain a document from an employer that has grammar, spelling, and punctuation errors. Have the students correct all errors. | |
| Provide microcomputer software for individual tutoring. | Observe progress of students. Discuss student progress in an interview with student. |
| Reinforce the learning of grammar and punctuation rules by using a student activity guide or workbook. Common areas of misuse of grammar are as follows: subject, verb agreement; pronoun antecedent; words alike (spelled differently, different meanings). Common errors of the misuse of punctuation and capitalization are commas, hyphenated words, and when to capitalize. | Evaluate activity guides or workbook pages. |
| Assign sentences, paragraphs, and business letters containing grammar and punctuation problems necessary to develop proficiency in Business English. | Critique with use of overhead projector so students can see work of the group. |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| C. Vocabulary and Spelling | develop and use an effective business vocabulary.<br>understand the importance of and utilize good spelling. |
| D. Records Management and Retrieval | develop an understanding of indexing/alphabetic records management rules and retrieval systems. |
| E. Review of Basic Keyboarding/ Typewriting and Productions Skills | understand and utilize proper keyboarding techniques and job production on word processing equipment. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Secure and use a textbook written specifically for the purpose of increasing business vocabulary and spelling skills. | |
| Reinforce learning by using student activity guides or workbooks. | Evaluate activity guides or workbook pages. |
| Utilize microcomputer software to build vocabulary and spelling. Refer to the Appendix for a spelling drill program listed under English Usage. | |
| Practice on spelling tapes to reinforce learning. | |
| Teach students the different filing systems: alphabetic, numeric, subject, and geographic. | |
| Assign drills on words that are confusing to the student. | |
| Insist on correct spelling in all business classes. | Evaluate spelling in all subject areas of business: classwork, homework, and tests. |
| Secure a textbook that has basic indexing and filing rules and procedures. The textbook will need to incorporate the entire scope of records management and retrieval systems taking into account magnetic media storage and coding systems. Use student projects or practice sets for added emphasis. | Administer tests on records management and retrieval.<br>Evaluate indexing and filing jobs as rules are learned. |
| Develop a consistency in designating file names for more efficient record management, i.e., last name of job originator, date of document. | |
| Utilize microcomputer records management software to enhance learning. | |
| Take a field trip to learn what records management systems are being used in business; this can be individual or group trips. | Use oral or written reports for evaluation of field trip. |
| Review proper keyboarding techniques and the various job production skills from a keyboarding/typewriting textbook. | |
| Instruct students wihout a keyboarding skill in basic keyboarding. Use an appropriate textbook for this purpose. | |
| Provide microcomputer software to review skills. | |

# NOTES

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| ACTIVITIES | EVALUATIONS |
|---|---|
| Review and use word processing terminology in the completion of all keyboarding tasks in regular typewriting classes. Choose a keyboarding textbook that integrates word processing terminology through the lessons. | |
| Review formating for letters, reports, and other documents. | |
| Improve keyboarding technique/speed with timed drill from rough draft. | Administer 3- or 5-minute timed writings. Keep a record of timed writings and note progress. Check timed production problems. |
| Obtain business forms applicable to the jobs being produced for reality in the classroom. | Evaluate timed production problems using business forms. |
| Include exercises with handwritten or rough draft copy for practice in this area. | |
| Dictate to the students while they are typing to help prepare them for typing without hard copy. | Observe students. |
| Instruct each student to set up his/her own filing system. The system may be totally manual, totally computerized, or a combination of both. Have each student keep up with the system throughout the semester. Revise the system when necessary. | Examine the system for efficiency and organization. |
| Allow students to choose a business to visit (with permission) where they can spend a half day or day observing one person's role in the business, i.e., manager, supervisor. | |
| Utilize simulations or practice sets that require no special equipment to approximate real-world situations for varied word processing experience. | Evaluate mailability of documents completed (placement, arrangement, and neatness). |
| Demonstrate different touch and stroking techniques for electric, electronic, and word processors. | |
| Instruct students in proper work station management and care of the equipment. | Evaluate each student's work station. |
| Discuss correcting techniques on word processing equipment. | |
| Teach touch operation of the 10-key numeric pad. | |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| F. Proofreading/Editing and Error Correction Skills | develop ability to locate, change, and properly correct errors. |
| G. Communication Skills (Oral, Handwritten, Printed) | understand how to give and follow instructions whether oral, handwritten, or printed. |
| H. Use of Reference Materials | understand how to use the dictionary, thesaurus, telephone directory, and secretarial reference manual |
| III. Equipment Used in Training Word Processors | |
| A. Introduction to Available Equipment | recognize the scope of equipment available. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Demonstrate to students the different ways to proofread. The students should realize that an employer appreciates "perfection". Perfection should be an ultimate goal for each student. Do not guess; check for factual proof. | Check proofreading skills. |
| Compare the differences in error correction on manual, electric, and electronic typewriters. | Check error correction techniques. |
| Review proofreader's marks. Then insist that students learn to use proofreader's marks on all corrected work. (Use proofreader's marks on papers returned to students.) | Administer objective test. |
| Enhance listening ability by giving students oral instructions. | Test student's ability to complete a job after being given oral instructions. |
| Teach students to follow instructions effectively. Assignments could be accompanied by a work order or instruction form. | |
| Utilize tape recorders to improve students' pronunciation, enunciation, and ability to give instructions. | Evaluate by having students follow each other's instructions on a simple task using tapes. |
| Obtain telephone company teaching materials to teach proper use of the telephone. | Evaluate student's telephone techniques. |
| Utilize role playing to develop communication skills in oral and written communications. | Observe students and their ranking of each other. |
| Work with students to develop ability to read manuals and follow written instructions. | |
| Identify desirable work habits and stress these habits to students. | |
| Conduct a class discussion and directed activity in the use of reference materials. | Administer a performance test. |
| Make assignments from study guides, workbooks, and other commercially prepared materials for added emphasis. | Evaluate selected study guides. |
| Utilize films, slide-tape presentations, and demonstrations to acquaint students with equipment. | |
| Visit vendors' offices, word processing trade shows, symposiums, seminars, and offices that use word processing equipment. | |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
|  | The student(s) will: |
| B. Conventional Electric Office Typewriters | understand typewriting as the core of word processing. |
| C. Classifications of Text-Editing Typewriters | understand how to use available text-editing typewriters. |
| 1. Word Processors<br>2. Automated Typewriters<br>3. Power Typewriters<br>4. Smart or Intelligent Typewriters |  |
| 5. Nondisplay Electronic Text Editors (Word Processors) | develop understanding of how to use a nondisplay electronic text editor. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Stress importance of utilization of all capabilities of each equipment exposure to the students. | |
| Invite guest speakers, particularly those employed as word processing operators to explain to the students how the equipment is utilized. | |
| Review advantages of word processors. Compare production rate and editing of documents using conventional typewriters and text editors. | |
| Make use of teacher demonstrations or employee demonstrations of equipment in the school system for added emphasis. | |
| Refer to II-E of this guide for developing or reviewing keyboarding/typewriting and production skills and using conventional typewriters and 10-key numeric pads in a word processing framework. | |
| Utilize teacher demonstration of available classroom equipment. | |
| Direct detailed independent study through the training manual or reference manual that is included with the equipment to learn the basic operations, machine components, and storage capabilities. | Grade by teacher observation. |
| Explain to the students that an automated typewriter retains a typed document which can be recalled, edited, and printed out without retyping. The nondisplay typewriter does not have a visual screen. | |
| Reinforce learning by having students review commercially prepared tapes, films, filmstrips, workbooks, etc. | |
| Discuss how the word processor with its automated capabilities can increase a typist's productivity. | |
| Practice keyboarding simple documents, i.e., letters, memorandums, tabulations, reports, form letters. When each document is keyed in, have students print out a copy, proofread, store, recall, edit stored copy, print out a mailable copy, and store. Follow the simple documents with more difficult ones. | Administer a performance test to check student's ability to input/output, proofread, edit stored copy, use equipment components, and print in mailable form the documents required. Use a required minimum number of documents in assigning grades. |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| 6. Display Text Editors (Word Processors) | comprehend how to use a display text editor |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Explain to the students how to create their own personal data sheet or resume, letter of application, and follow-up letter. Teachers in other areas who have students complete similar projects should be encouraged to use automated equipment for the keyboarding, editing, storing, and printing capabilities. | Grade on student's personal job portfolio. |
| Direct students, after they have become competent in the use of computers, to make a list of shortcuts which may help others. | |
| Individualize student work by having each student balance and keep his/her checkbook. | |
| Utilize practice sets available from different services. | |
| Set up a small business within the classroom (bake sale, homecoming, etc.) and actually do correspondence on the system. | |
| Complete practice sets or simulations which combine many different types of office word processing tasks. | Evaluate completed copy for mailability. Set up minimum standards for number of jobs each student is expected to complete. |
| Explain to the students how to use nondisplay electronic text editors for producing the output where the method of input is from shorthand dictation and/or dictation equipment. | |
| Explain to the students that the display word processor is an electronic typewriter with a memory and a screen. The words or format of a stored document can be edited by using the visual screen. | |
| Demonstrate to the students display text editor equipment emphasizing the following components, i.e., keyboard, display screen, console, printer. | |
| Reinforce learning by using films and filmstrips on available hardware and software. | |
| Demonstrate proper use and care of hardware and software. | |
| Supervise student's independent study through the self-teaching training manual that accompanies the equipment to be sure students learn the basic operation, storage use and capability, and printing procedure. | Grade by teacher observation. |
| Demonstrate commercially prepared software, i.e., tapes, disks, transparencies, workbooks. | |

# NOTES

| ACTIVITIES | EVALUATIONS |
|---|---|
| Choose a textbook/workbook that extends the student's proficiency in handling the equipment and completing various documents. | Check and reassign problems when student shows lack of understanding. |
| Practice keyboarding simple, teacher-inspired documents, i.e., letters with envelopes memorandums, tabulations, reports. | Determine a minimum standard for number of mailable documents required and reassign documents not correctly completed to meet the minimum. |
| Design problem documents that will accomplish the following: | Evaluate problem documents that indicate student's ability to perform tasks and reassign documents which are incorrect. |
| 1. Check students' recall and understanding of menus.<br>2. Ability to make corrections while keyboarding, use of the cursor, and typing from rough draft.<br>3. Ability to use the text editor spelling function.<br>4. Skill in recalling stored jobs, editing, and then printing mailable copy.<br>5. Correct use of machine components.<br>6. Competence in using text editor functions of centering, underscoring, tabulating, paginating, etc. | Evaluate documents produced for mailability. |
| Assign a specific task giving the students total responsibility. Encourage creativity to perform the task without dependence on instructional materials. Use very little, if any, supervision. | Grade on the ability of the student to retain and apply what he/she has learned. |
| Assign exercises dealing with unusual jobs such as organizational manuals, setting up publications (right and left pages with one or two columns, right margin justified, etc.). This can be a challenge to some students. | |
| Extend and reinforce students' proficiencies with additional keyboarding and revising of business letters, memorandums, rough draft copies, form letters with variables, tables, decimal tabulations, correspondence with tables, and reports with footnotes. | Allot a minimum number of mailable documents to be completed, and reassign documents that are not correctly completed to meet the minimum. |
| Permit students to complete and submit "real" jobs using text editing equipment. | Observe each student's use of the equipment in completion of the documents. |
| Utilize practice sets and simulations to reinforce learning. | Grade completed jobs. |
| Utilize personal use projects--student's personal data sheet or resume, application letter, follow-up letter, or a report from another class to aid in the learning process. | Observe student's use of the display word processor in completion of the project. |
| Explain how to use display text editors for producing output when the method of input is from shorthand dictation or dictation equipment. | Evaluate mailable documents. |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| 7. Microcomputers | understand how to use a microcomputer for word processing. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Explain to the students that a microcomputer can be used for calculating, storing, updating, and using information. Hardware components include alphanumeric keyboard, display screen, disk drives, ten-key numeric pad, and printer. | |
| Discuss with the students the components for word processing on the microcomputer that usually includes the alphanumeric keyboard, display screen, disk drives, ten-key numeric pad, and printer. | |
| Show films that demonstrate the various types of hardware available for classroom use. | |
| Emphasize proper use, care, and storage of software. | |
| Supervise the students' study through the training package*, which may include the manual, tapes, or visual materials. The training package includes the software that causes the microcomputer to function as a word processor. The students do not need to know a computer language to use the software, however, knowing the name of languages and the basis for each would be very helpful. | Check each student's progress through the training package. |
| Guide the students in writing a simple program. Check the Appendix for ideas. | |
| Secure commercially prepared transparencies to accompany the tapes and use for group presentation and training. | |
| Prepare your own set of transparencies to follow the tapes and use them for group presentation to students who are learning to operate a microcomputer as a word processor. | |
| Make your own set of transparencies to accompany the training package and to use for group training. | |
| Secure workbooks to accompany training package and/or tapes. | |
| Determine students' understanding of the training package by assigning letters, tables, memorandums, rough draft copies, form letters with variables, decimal tabulations, correspondence with tables, and reports with footnotes--which require application of skills and abilities learned from the training | Assess a minimum number of mailable documents to be completed, and reassign documents that are not correctly completed to meet the minimum. |

---

*See your dealer for the appropriate software package for your microcomputer.

NOTES

| ACTIVITIES | EVALUATIONS |
|---|---|
| package. Problems should be designed to cover the following:<br>1. component operation<br>2. loading file<br>3. use of menus<br>4. total document formating<br>5. use of cursor<br>6. keyboarding techniques<br>7. correcting/editing (inserting, deleting, overwriting, exchanging, moving text, etc.)<br>8. saving<br>9. printing<br>10. recalling<br>11. changing formats<br>12. revising/editing copy<br>13. quitting<br>14. effective handling of hardware and software | Administer a performance test to check student's ability to complete the problems. |
| Utilize textbooks/workbooks with additional keyboarding applications and exercises for added practice. | Grade for mailable copy. |
| Reinforce learning by using practice sets and simulations to give students office-type experience. | |
| Involve students on a personal-use level by having them develop a "personal job interview portfolio" which includes a personal data sheet or resume, letter of application, and follow-up letter. Teachers in other areas who have students completing similar projects should be encouraged to use automated equipment because of the keyboarding, editing, storing, and printing capabilities. | Evaluate by having student compile a "perfect" copy of each in portfolio. |
| Utilize the microcomputer to prepare the school newspaper. | |
| Permit students to complete and submit "real" office documents they have completed on microcomputers. | Measure student's use of the microcomputer by completion of the documents. |
| Allow students to complete reports on the microcomputer using a specific format when the reports are for other classes. | Grade by observation of student's progress through the preparation of the report using the microcomputer. |
| Utilize the microcomputer to keep inventory and books for the school store. Have students discuss programs that should be used. | |
| Utilize the microcomputer for producing output where the method of input is shorthand dictation and/or dictation equipment. | Evaluate mailable documents. |

| OUTLINE OF CONTENT | OBJECTIVES |
|---|---|
| | The student(s) will: |
| 8. Computers | understand how to use time-shared computers for word processing. |

| ACTIVITIES | EVALUATIONS |
|---|---|
| Explain to the students that a user terminal is connected to a related out-of-house computer system by a telephone network. | |
| Explain time sharing on computers to the students. | |
| Show films and filmstrips that explain the use of time-sharing on computers for added emphasis. | |
| Invite guest speakers from businesses who sell time sharing and invite guest speakers from businesses who buy time sharing to speak to the class. | |
| Conduct a field trip or visit business centers that sell time on an in-house computer. | |
| Visit businesses that buy time from an out-of-house computer to demonstrate how this is utilized. | |
| Have students give oral reports on information gathered on time sharing. | Grade oral report information/presentation. |
| Determine the availability of a time-shared computer to be used for word processing instruction. Discuss feasibility of using time sharing. | |
| Conduct a field trip to a local equipment show. | Evaluate field trip. |
| Invite a sales representative from an equipment company to come and demonstrate to the students the equipment the company has available. | Evaluate advantages and disadvantages of the equipment. |
| Make students aware of the necessity for operational techniques required by operators of equipment from different companies. | |

# INTRODUCTION

The Appendix is a collection of programs that may be keyed into the computer and run by students. These are provided as an aid and encouragement to the teacher who may hesitate to write his/her own programs. Some require printers, but many are for CRT output only. They have purposely been kept as simple as possible for ease of use. All REM statements may be omitted to shorten the keying time. They are included as documentation for the programs.

As many programs as possible have been provided for the Radio Shack (TRS-80), Apple, Atari, and Commodore Pet computers. A variety of printers have been used including Radio Shack's Printer VIII, DWP410, DWPII, and the Centronics 730-1. The print quality varies because some printers are solid-line printers and some are dot-matrix printers.

In adapting programs from one computer to another there are several major concerns. They are as follows:

1. To clear the screen for output the statement is different for each computer: TRS-80--CLS; Apple--HOME; Pet--PRINT CHR$(147).
2. The TRS-80 provides a random function, but a routine must be written for the Pet and Apple computers.
3. The screen for the Pet and Apple computers provides a 40-character line with three columns. The TRS-80 has a

64-character line with four columns. The screen format must be adapted to a shorter line when using a TRS-80 program on the 40-character screen.

4. The PRINT USING statements in TRS-80 programs provide a print format for figures. This must be accomplished with an integer function on the Pet and Apple computers.

Keying accuracy is of utmost importance. The letter 'l' cannot be used for a numeral '1'; the letter 'O' cannot be used for a numeral 0. Typing errors in statements and mistakes in punctuation will prevent the program from executing properly.

Happy computing!

## USING THE APPENDIX

The programs in the Appendix are designed to assist the instructor in completing some of the activities listed in the general and accounting application sections of the guide.

The programs have been written for the Radio Shack (TRS-80), Apple, and Commodore Pet computers. However, with or without minor modifications, they may be used on other microcomputers. The programs have been written as short and simple as possible to ease the preparation time of the teacher.

The keying-in of the programs is simple and may be used as a data entry assignment for students. Students should be cautioned to key exactly as the program is written because punctuation, spacing, and spelling are sometimes critical.

Modification of the print statement will change the output from display to printer and vice versa. All programs may be typed without the "REM" statements to shorten the keying process since these statements are for documentation only.

```
100 REM ***********************************************
101 REM *  BANK RECONCILIATION              TRS-80    *
102 REM ***********************************************
103 REM
104 REM --PROGRAM TO RECONCILE A BANK STATEMENT.
109 CLS
110 PRINT "THIS PROGRAM WILL RECONCILE A BANK STATEMENT.  STRIKE
120 PRINT "THE ENTER KEY AFTER EACH UNRECORDED DEPOSIT OR OUTSTANDING CHECK."
130 REM DEFINITION OF VARIABLES: T$=
135 REM TODAY'S DATE.  BB = VALANCE SHOWN ON BANK STATEMENT
140 REM D = UNRECORDED DEPOSITS.  D1 = ACCUMULATOR FOR DEPOSITS
150 REM C = OUTSTANDING CHECKS.  C1 = ACCUMULATOR FOR OUT-
160 REM STANDING CHECKS.  RB = RECONCILED BANK BALANCE.
170 PRINT "DO YOU WISH INSTRUCTIONS? ENTER YES OR NO"
180 INPUT I$
190 IF I$= "YES" GOSUB 440
200 PRINT:PRINT
210 PRINT "ENTER TODAY'S DATE"
220 INPUT T$
230 PRINT:PRINT
240 PRINT "BALANCE ACCORDING TO BANK STATEMENT":INPUT BB
250 PRINT:PRINT
260 PRINT "ENTER UNRECORDED DEPOSITS AND OTHER TIEMS THAT WILL INCREASE THE";
270 PRINT "BALANCE AFTER STATEMENT DATE.  ENTER 0 WHEN ENTRIES ARE COMPLETE"
280 INPUT D
290 IF D = 0 THEN GOTO 330
300 D1 = D1 + D
310 GOTO 280
320 PRINT:PRINT
330 PRINT "ENTER OUTSTANDING CHECKS OR ANY ITEMS THAT WILL"
340 PRINT "DECREASE THE BALANCE SHOWN ON THE BANK STATEMENT."
350 PRINT "ENTER 0 WHEN ENTRIES ARE COMPLETE."
360 INPUT C
370 IF C = 0 THEN 400
380 C1 = C1 +C
390 GOTO 360
400 RB = BB + D1 - C1
410 PRINT:PRINT
420 PRINT "THE CORRECTED BANK BALANCE AS OF "T$ " IS $"RB
430 END
440 PRINT:PRINT
450 PRINT "DO NOT USE ANY COMMAS WHEN ENTERING THE DATA.
460 PRINT "ENTER EACH CHECK OR DEPOSIT ON A SEPARATE LINE."
470 PRINT "THE RECONCILED BALANCE SHOULD BE THE SAME AS YOUR"
480 PRINT "CHECKBOOK BALANCE AFTER CORRECTIONS HAVE BEEN MADE."
490 PRINT "TO START THE PROGRAM ENTER THE S KEY AFTER THE"
500 PRINT "QUESTION MARK."
510 INPUT T$
520 PRINT:PRINT
530 CLS
540 RETURN
```

```
10  REM  *******************************************************
20  REM  *   BANK RECONCILIATION                   APPLE II    *
30  REM  *******************************************************
40  REM  *     OUTSTANDING CHECKS ARE TO BE LISTED IN THE      *
50  REM  *          DATA STATEMENT IN LINE NUMBER 800          *
60  REM  *******************************************************
70  DIM N(100)
80  DIM A(100)
85  INPUT "NUMBER OF OUTSTANDING CHECKS: ";N: HOME
90  FOR X = 1 TO N
100  READ A(X)
110  IF A(X) = 0 THEN 140
120 TA = TA + A(X)
130  NEXT X
140  INPUT "NAME OF ACCOUNT: ";Z$
150  INPUT "NAME OF BANK: ";B$
160  INPUT "DATE OF STATEMENT: ";TIME$
170  INPUT "BANK BALANCE: ";BB
180  INPUT "CHECKBOOK BALANCE: ";CB
190  FOR X = 1 TO 10
200  INPUT "OUTSTANDING DEPOSITS (ENTER 0 IF NONE) ";D
210 TD = TD + D
220  IF D = 0 THEN 240
230  NEXT X
240  INPUT "SERVICE CHARGE (ENTER 0 IF NONE) ";S
250  INPUT "CHARGE FOR PRINTED CHECKS (ENTER 0 IF NONE) ";PC
260  INPUT "OTHER BANK CHARGES (ENTER 0 IF NONE) ";BC
270  FOR X = 1 TO 3
280  INPUT "ADDITIONS TO BANK ACCOUNT BY BANK (ENTER 0 IF NONE) ";B1
290  IF B1 = 0 THEN 320
300 BA = BA + B1
310  NEXT X
320  REM
330 ST = BB + TD
340 FB = ST - TA
350 T1 = CB + BA
360 T2 = S + PC + BC
370 T3 = T1 - T2
380  CALL  - 936: PR# 1: PRINT "": PRINT  TAB( 35)Z$
390  PRINT  TAB( 25)"BANK RECONCILIATION STATEMENT"
400  PRINT  TAB( 31)TIME$
410  PRINT " "
420  PRINT B$
430 G$ = "=":G = 80: FOR H = 1 TO G: PRINT G$;: NEXT
440  PRINT "BANK STATEMENT BALANCE" SPC( 47)"$ ";BB
450  IF TD > 0 THEN  PRINT  TAB( 7)"OUTSTANDING DEPOSITS" SPC( 45);TD
460  IF TD > 0 THEN  PRINT  TAB( 70)"----------"
470  IF TD > 0 THEN  PRINT  TAB( 72);ST
480  PRINT  TAB( 7)"OUTSTANDING CHECKS" SPC( 48);TA
490  PRINT  TAB( 70)"----------"
```

(Continued on next page)

```
500 FB =  INT (100 * FB + .5) / 100: PRINT "ENDING BANK BALANCE" SPC( 50)"
     $ ";FB
510  PRINT  TAB( 70)"=========="
520  PRINT " "
530  PRINT "CHECKBOOK BALANCE" SPC( 52)"$ ";CB
540  IF BA > 0 THEN  PRINT  TAB( 7)"ADDITIONS TO BANK ACCOUNT BY BANK" SPC(
     34);BA
550  IF BA > 0 THEN  PRINT  TAB( 70)"----------"
560  IF BA > 0 THEN  PRINT  TAB( 72);T1
570  IF S > 0 THEN  PRINT  TAB( 7)"SERVICE CHARGE" SPC( 53);S
580  IF PC > 0 THEN  PRINT  TAB( 7)"CHARGE FOR PRINTING CHECKS" SPC( 41);P
     C
590  IF BC > 0 THEN  PRINT  TAB( 7)"OTHER BANK CHARGES" SPC( 48);BC
600  PRINT  TAB( 7)"TOTAL DEDUCTIONS" SPC( 50);T2
610  PRINT  TAB( 70)"----------"
620  PRINT "ENDING CHECKBOOK BALANCE" SPC( 45)"$ ";T3
630  PRINT  TAB( 70)"=========="
640  IF  INT (FB * 100 + .5) / 100 =  INT (T3 * 100 + .5) / 100 THEN  PRINT
      TAB( 20)"STATEMENT RECONCILED"
650  IF  INT (FB * 100 + .5) / 100 <  >  INT (T3 * 100 + .5) / 100 THEN  PRINT
      TAB( 20)"STATEMENT NOT RECONCILED"
660  IF  INT (FB * 100 + .5) / 100 <  >  INT (T3 * 100 + .5) / 100 THEN  PRINT
      TAB( 20)"ERROR OF ";
670  IF  INT (FB * 100 + .5) / 100 <  >  INT (T3 * 100 + .5) / 100 THEN  PRINT
      TAB( 30)"$ ";FB - T3
680 G$ = "=":G = 80: FOR H = 1 TO G: PRINT G$;: NEXT
690  PRINT " "
700  PRINT "OUTSTANDING CHECKS"
710  PRINT " "
720  PRINT " "
730  FOR X = 1 TO N STEP 3
740  IF A(X) = 0 THEN
750  PRINT  TAB( 20);A(X) SPC( 20);A(X + 1);
760  PRINT  SPC( 20)A(X + 2)
770  NEXT X
780  PRINT " "
790  PRINT " "
800  DATA
810  PR# 0
1000  END
```

Outstanding checks need to be listed in a data statement before the program is run.

```
Simply type:  800 DATA 25.00,13.75,50.00,12.95     <RETURN>

              RUN     <RETURN>
```

and the program will begin.

```
10 REM *****************************************
20 REM *   BANK RECONCILIATION PROGRAM         *
30 REM *   WRITTEN FOR THE TRS-80 MODEL III    *
40 REM *****************************************
50 CLEAR 1000
60 DEFDBL B,C,D,T,S,F
70 DIM N(100)
80 DIM A(100)
90 X$="$$##,###.##":Y$="###,###.##"
100 FOR X = 1 TO 100
110 READ A(X)
120 IF A(X) = 0 THEN 150
130 TA=TA+A(X)
140 NEXT X
150 INPUT "NAME OF ACCOUNT";Z$
160 INPUT "NAME OF BANK";B$
170 INPUT "BANK BALANCE";BB
180 INPUT "CHECKBOOK BALANCE";CB
190 FOR X = 1 TO 10
200 INPUT "OUTSTANDING DEPOSITS (ENTER 0 IF NONE)";D
210 TD = TD + D
220 IF D = 0 THEN 240
230 NEXT X
240 INPUT "AMOUNT IN BANK BUT NOT SHOWN ON CHECKBOOK";BL
250 INPUT "SERVICE CHARGE (ENTER 0 IF NONE)";S
260 INPUT "CHARGE FOR PRINTED CHECKS (ENTER 0 IF NONE)";PC
270 INPUT "OTHER BANK CHARGES (ENTER 0 IF NONE)";BC
280 FOR X = 1 TO 3
290 INPUT "ADDITIONS TO BANK ACCOUNT BY BANK (ENTER 0 IF NONE)";B1
300 IF B1 =0 THEN 330
310 BA=BA+B1
320 NEXT X
330 REM
340 ST=BB+TD
350 S1=ST-BL
360 FB=S1-TA
370 T1=CB+BA
380 T2=S+PC+BC
390 T3=T1-T2
400 LPRINT TAB(35) Z$
410 LPRINT TAB(25)"BANK RECONCILIATION STATEMENT"
420 LPRINT TAB(31)TIME$
430 LPRINT " "
440 LPRINT B$
450 LPRINT STRING$(80,"=")
460 LPRINT "BANK STATEMENT BALANCE";TAB(69)USING X$;BB
470 IF TD > 0 THEN LPRINT TAB(3)"OUTSTANDING DEPOSITS";TAB(70)USING Y$;TD
480 IF TD > 0 THEN LPRINT TAB(70)"----------"
490 IF TD > 0 THEN LPRINT TAB(70)USINGY$;ST
500 LPRINT TAB(3)"OUTSTANDING CHECKS";TAB(70)USING Y$;TA
510 LPRINT TAB(70)"----------"
520 LPRINT "ENDING BANK BALANCE";TAB(69)USING X$;FB
530 LPRINT TAB(70)"=========="
540 LPRINT " "
550 LPRINT "CHECKBOOK BALANCE";TAB(69)USING X$;CB
560 IF BA > 0 THEN LPRINT TAB(3)"ADDITIONS TO BANK ACCOUNT BY BANK";TAB(70)USING
 Y$;BA
570 IF BA > 0 THEN LPRINT TAB(70)"----------"
580 IF BA > 0 THEN LPRINT TAB(70)USING Y$;T1
```

(Continued on next page)

```
590 IF S > 0 THEN LPRINT TAB(3)"SERVICE CHARGE";TAB(50)USING Y$;S
600 IF PC > 0 THEN LPRINT TAB(3)"CHARGE FOR PRINTING CHECKS";TAB(50)USING Y$;PC
610 IF BC > 0 THEN LPRINT TAB(3)"OTHER BANK CHARGES";TAB(50)USING Y$;BC
620 LPRINT TAB(3)"TOTAL DEDUCTIONS";TAB(70)USINGY$;T2
630 LPRINT TAB(70)"----------"
640 LPRINT "ENDING CHECKBOOK BALANCE";TAB(69)USING X$;T3
650 LPRINT TAB(70)"=========="
660 IF INT(FB*100+.5)/100 = INT(T3*100+.5)/100 THEN LPRINT TAB(20)"STATEMENT REC
ONCILED"
670 IF INT(FB*100+.5)/100<>INT(T3*100+.5)/100 THEN LPRINT TAB(20)"STATEMENT NOT
RECONCILED"
680 IF INT(FB*100+.5)/100 <> INT(T3*100+.5)/100 THEN LPRINT TAB(20)"ERROR OF ";
690 IF INT(FB*100+.5)/100 <> INT(T3*100+.5)/100 THEN LPRINT TAB(30) USING Y$;FB-
T3
700 LPRINT STRING$(80,"=")
710 LPRINT " "
720 LPRINT "OUTSTANDING CHECKS"
730 LPRINT " "
740 LPRINT " "
750 FOR X = 1 TO 100 STEP 2
760 IF A(X) = 0 THEN 810
770 LPRINT TAB(20)USING Y$;A(X);
780 LPRINT TAB(60)USING Y$;A(X+1)
790 NEXT X
800 DATA 39.60,9.93,5,10,25,13.94,35,9.31,8.56,31.26,20.50,120,85.60,18.80,120,0
810 END
```

INSTRUCTIONS: OUTSTANDING CHECKS ARE TO BE LISTED IN THE DATA STATEMENT. REPLACE THE PRINTED DATA STATEMENT WITH YOUR OWN LIST OF OUTSTANDING CHECKS.

```
100 REM ******************************************************
110 REM *   CAREERS                     TRS-80 MODEL III     *
120 REM ******************************************************
130 REM
140 REM --PROGRAM TO DISPLAY A BAR GRAPH SHOWING THE
150 REM DIFFERENCE IN LIFETIME INCOME FOR PEOPLE WITH
160 REM VARIOUS LEVELS OF EDUCATION.
210 CLS
220 INPUT "ENTER YOUR NAME PLEASE ";N$
230 CLS
240 PRINTTAB(35);"INCOME (THOUSANDS)
245 PRINT
260 PRINTTAB(25)400;TAB(35)500;TAB(45)600;TAB(55)700
265 PRINT "   LEVEL OF EDUCATION"
270 FOR X=1 TO 3
275 PRINT
280 READ E$,A
285 PRINT
290 C=LEN(E$):PRINTTAB(24-C)E$;
300 D=A*5+27:FOR Z=29 TO D:PRINT CHR$(166);:NEXT Z
310 DATA "EIGHTH GRADE   ", 1.7, "HIGH SCHOOL   ", 2.8
320 DATA "COLLEGE   ", 6.7
330 NEXT X
335 FOR W=10 TO 35:SET(47,W):NEXT W
340 FOR Y=47 TO 120 :SET(Y,10):NEXT Y
345 FOR Y=47 TO 120:SET(Y,35):NEXT Y
348 C=0
350 FOR X= 1 TO 5
360 READ Q$,A$
370 PRINT @ 832,Q$;
380 INPUT I$
385 IF I$=A$ THEN C=C+1
390 NEXT X
400 DATA "WHAT LEVEL OF EDUCATION GIVES THE HIGHEST LIFETIME INCOME:      (A) EIGHTH (B) HIGH SCHOOL (C) COLLEGE",A
410 DATA "WHAT LEVEL OF EDUCATION GIVES THE LOWEST LIFETIME INCOME:       (A) EIGHTH (B) HIGH SCHOOL (C) COLLEGE",A
420 DATA "HOW MUCH MORE WOULD BE EARNED (IN MILLIONS OF DOLLARS) BY       GOING TO COLLEGE: (A) 200 (B) 100 (C) 250",A
430 DATA "WITH AN AVERAGE WORKING LIFE OF 45 YEARS THE ANNUAL SALARY OF  A HIGH SCHOOL GRADUATE IS ABOUT: (A)7000 (B)9000 (C)11000",C
440 DATA "WITH AN AVERAGE WORKING LIFE OF 45 YEARS THE ANNUAL SALARY OF  A COLLEGE GRADUATE IS ABOUT:  (A) 19000  (B) 15000 (C) 12000",B
450 CLS:PRINT N$" YOU GOT"C"CORRECT WHICH IS "C/5*100"%"
```

```
100 REM ***************************************************************
110 REM *    CAREERS                                    TRS-80    *
120 REM ***************************************************************
130 REM
140 REM --PROGRAM TO PLOT BAR GRAPH FOR WORKERS NEEDED IN
150 REM THE YEAR 2000 BASED ON INPUT FROM KEYBOARD.
200 CLS
210 FOR A=1 TO 9:READ A$(A):PRINT"ENTER NUMBER OF "A$(A)" WORKERS NEEDED IN MILLIONS BY 2000";
230 INPUT B(A):PRINT:NEXT A
250 CLS:Y=7:PRINTTAB(14)"WORKERS NEEDED BY 2000 (IN MILLIONS)":PRINT
260 PRINTTAB(36)"0  2  4  6  8 10 12 14 16"
270 FOR A=1 TO 9:C(A)=LEN(A$(A)):PRINTTAB(34-C(A)) A$(A):NEXT A
290 FOR A=1 TO 9:D(A)=B(A)*3+72:Y=Y+3:FOR Z=72 TO D(A):SET(Z,Y):NEXT Z:NEXT A
310 DATA CLERICAL, PROFESSIONAL AND TECHNICAL, SERVICE
320 DATA OPERATIVES, MANAGERS OFFICIALS AND PROPRIETORS
330 DATA CRAFTS AND SUPERVISORS, SALESWORKERS, NONFARM LABORERS
340 DATA FARM
```

---

```
100 REM ****************************************************
110 REM *  CAREERS                    APPLE/PET/TRS-80    *
120 REM ****************************************************
130 REM
140 REM  --PROGRAM TO QUIZ STUDENTS ON WOMEN'S CURRENT
150 REM  POSITION IN THE LABOR FORCE.
155 REM
160 REM  CHANGE CLS STATEMENTS TO:
170 REM  PRINT CHR$(147)--PET   HOME--APPLE
175 REM  SHORTEN PROGRAM LINES TO WORK ON APPLE/PET
180 CLS
185 INPUT "ENTER YOUR NAME ";N$
190 CLS:PRINT "       W O M E N ' S     W O R K  "
200 PRINT:PRINT "THE FOLLOWING QUESTIONS INDICATE THE CURRENT POSITION"
210 PRINT "OF WOMEN IN THE LABOR FORCE.  ENTER 'TRUE' OR 'FALSE'."
215 FOR X=1 TO 7
220 PRINT:IF X=1 THEN PRINT "1.  MOST SECRETARIES ARE FEMALE.";
230 IF X=2 THEN PRINT "2. WOMEN IN THE SAME OCCUPATION EARN THE SAME AS MEN."
240 IF X=3 THEN PRINT "3. 25 % OF ALL LAWYERS ARE WOMEN."
250 IF X=4 THEN PRINT "4. OVER HALF OF ALL WOMEN WORK."
260 IF X=5 THEN PRINT "5. MOST WOMEN WORKERS EARN $10,000 OR MORE."
270 IF X=6 THEN PRINT "6. HALF OF THE NUMBER OF DOCTORS ARE WOMEN."
280 IF X=7 THEN PRINT "7. THE MAJORITY OF MARRIED WOMEN WORK."
400 INPUT A$
410 READ D$
420 IF A$=D$ THEN PRINT "G R E A T ":C=C+1
430 IF A$<>D$ THEN PRINT "ANSWER IS "D$
440 FOR Z=1 TO 500:NEXT Z
450 CLS
460 NEXT X
470 DATA TRUE, FALSE, FALSE, TRUE, FALSE, FALSE, TRUE
480 PRINT N$" YOUR SCORE IS";C "OUT OF 7 OR";C/7*100"PERCENT"
```

```
100 REM **************************************************
110 REM *   CAREERS                APPLE/PET/TRS-80      *
120 REM **************************************************
130 REM
140 REM  --PROGRAM WILL PRINT OUT THE REQUIRED SUBJECTS
150 REM  FOR THE  VARIOUS GRADE  LEVELS.  CHANGE LINES
160 REM  WITH  REQUIREMENTS  TO  REFLECT  YOUR SCHOOL'S
170 REM  COURSES.
180 REM
190 REM  CHANGE CLS STATEMENTS TO:
200 REM     PRINT CHR$(147)--PET   HOME--APPLE
210 CLS
220 PRINT "THIS PROGRAM WILL SHOW REQUIRED"
230 PRINT "COURSES FOR EACH GRADE LEVEL---"
240 PRINT "ENTER 1, 2, 3, OR 4  (-99 TO END)
250 PRINT:PRINT "1.  FRESHMAN
260 PRINT "2.  SOPHOMORE"
270 PRINT "3.  JUNIOR"
280 PRINT "4.  SENIOR"
290 INPUT K
295 IF K=-99 THEN GOTO 800
300 ON K GOTO 400,500,600,700
400 CLS:PRINT "REQUIREMENTS FOR FRESHMEN ARE:"
410 PRINT:PRINT "ENGLISH I","MATH","SCIENCE"
420 PRINT "PE"
430 PRINT:PRINT "PRESS <ENTER> KEY WHEN FINISHED"
435 INPUT A$
440 GOTO 210
500 CLS:PRINT "REQUIREMENTS FOR SOPHOMORES ARE:"
510 PRINT:PRINT "ENGLISH II","MATH","SCIENCE"
520 PRINT "OK HISTORY"
530 PRINT:PRINT "PRESS <ENTER> KEY WHEN FINISHED"
535 INPUT A$
540 GOTO 210
600 CLS:PRINT "REQUIREMENTS FOR JUNIORS ARE:"
610 PRINT:PRINT "ENGLISH III","U.S. HISTORY"
630 PRINT:PRINT "PRESS <ENTER> KEY WHEN FINISHED"
635 INPUT A$
640 GOTO 210
700 CLS:PRINT "REQUIREMENTS FOR SENIORS ARE:"
710 PRINT:PRINT "ENGLISH IV","WORLD CULTURES"
730 PRINT:PRINT "PRESS <ENTER> KEY WHEN FINISHED"
735 INPUT A$
740 GOTO 210
800 CLS:PRINT "PROGRAM TERMINATED BY USER"
810 END
```

```
100 REM ****************************************************
110 REM *   CAREERS                              TRS-80    *
120 REM ****************************************************
130 REM
140 REM  --PROGRAM TO SHOW WHAT TIME IS WORTH IN MINUTES
150 REM  AND HOURS FOR VARIOUS LEVELS OF SALARY
160 REM
170 REM   CHANGE PRINT STATEMENTS TO LPRINT
180 REM  IF YOU WOULD LIKE A COMPUTER PRINTOUT.
230 CLS
240 PRINT "THIS PROGRAM LETS THE COMPUTER CALCULATE THE WORTH"
250 PRINT "OF YOUR HOURS AND MINUTES BASED ON VARIOUS LEVELS"
260 PRINT "OF SALARY."
270 PRINT:PRINT
275 PRINT "ENTER SALARIES WITHOUT COMMAS OR $"
280 INPUT "ENTER A BEGINNING SALARY";BS
290 INPUT "ENTER AN ENDING SALARY";ES
300 CLS
310 PRINT "        WHAT YOUR WORKING TIME IS WORTH"
320 PRINT
330 PRINT "SALARY","PER HOUR","PER MINUTE"
340 PRINT
350 FOR X = BS TO ES STEP 50
360 H=X/(40*49)
365 H$="##.##"
370 M=H/60
375 M$=".####"
380 PRINT X;TAB(17);USING H$;H;:PRINTTAB(34);USING M$;M
390 NEXT X
```

```
100 REM ****************************************************
110 REM *   CAREERS                        APPLE/PET       *
120 REM ****************************************************
130 REM
140 REM  --PROGRAM TO SHOW WHAT TIME IS WORTH IN MINUTES
150 REM  AND HOURS FOR VARIOUS LEVELS OF SALARY
160 REM
170 REM  FOR PET COMPUTER:
180 REM  CHANGE CLS STATEMENTS TO:
190 REM     PRINT CHR$(147)
230 HOME
240 PRINT "THIS PROGRAM LETS THE COMPUTER
245 PRINT "CALCULATE THE WORTH OF YOUR"
250 PRINT "HOURS AND MINUTES BASED ON"
255 PRINT "VARIOUS LEVELS OF SALARY."
270 PRINT:PRINT
275 PRINT "ENTER SALARIES--NO COMMAS OR $"
280 INPUT "ENTER A BEGINNING SALARY";BS
290 INPUT "ENTER AN ENDING SALARY";ES
300 HOME
310 PRINT "  WHAT YOUR WORKING TIME IS WORTH"
320 PRINT
330 PRINT "SALARY","HOUR","MINUTE"
340 PRINT
350 FOR X = BS TO ES STEP 50
360 H=X/(40*49)
370 M=H/60
380 PRINT X,H,M
390 NEXT X
```

```
100 REM ******************************************************
110 REM *     CREDIT                   APPLE/PET/TRS-80      *
120 REM ******************************************************
130 REM
140 REM  --PROGRAM TO DRILL STUDENTS ON THE DIFFERENCES AMONG
150 REM  CAPACITY, CHARACTER, AND CAPITAL  AFTER  THEY HAVE
160 REM  BEEN STUDIED.
170 REM
180 REM  FOR APPLE & PET--CHANGE CLS STATEMENTS TO:
190 REM     PRINT CHR$(147)--PET   HOME--APPLE
200 REM
210 CLS
220 PRINT "PLEASE KEY IN YOUR CHOICE OF"
230 PRINT "CAPACITY CHARACTER, OR CAPITAL:"
240 FOR X = 1 TO 8
250 READ Q$,A$
260 PRINT:PRINT:PRINT Q$;
270 INPUT R$
280 IF A$=R$ THEN PRINT "CORRECT":C=C+1
290 IF A$<>R$ THEN PRINT "THE ANSWER IS ";A$
300 FOR Z = 1 TO 500:NEXT Z
310 NEXT X
320 DATA SALARY, CAPACITY, ASSETS
325 DATA CAPITAL,REPUTATION
330 DATA CHARACTER, STOCKS OWNED, CAPITAL
340 DATA PAYING BILLS RAPIDLY, CHARACTER
350 DATA HOME OWNERSHIP, CAPITAL
360 DATA CREDIT REFERENCES, CHARACTER
370 DATA SAVING ACCOUNT, CAPITAL
375 CLS
380 PRINT:PRINT:PRINT "    **  SCORE  **"
390 PRINT:PRINT C "  OF  8  CORRECT"
```

```
100 REM *************************************************
110 REM *  CREDIT                   APPLE/PET/TRS-80    *
120 REM *************************************************
130 REM
140 REM  --PROGRAM WILL GENERATE INTEREST PROBLEMS FOR
150 REM  STUDENTS TO WORK AND WILL CHECK THEIR ANSWERS.
160 REM
165 REM  FOR APPLE & PET
170 REM  CHANGE CLS STATEMENTS TO:
180 REM    PRINT CHR$(147)--PET  HOME--APPLE
185 REM  OMIT LINE 305 & :PRINTUSING I$; ON LINE 320
188 REM  ON APPLE USE A SUBROUTINE FOR RND FUNCTION
190 REM
200 CLS:INPUT "ENTER YOUR NAME PLEASE";N$
210 CLS
220 P=RND(5000):R=RND(24):T=RND(36)
230 PRINT "PROBLEM IS:  PRINCIPAL =";P
240 PRINT "                  RATE =";R
250 PRINT "                  TIME =";T
260 PRINT
265 N=N+1
270 INPUT "WHAT IS THE INTEREST";A
280 R=R/100
290 R=R/12
300 I=P*T*R
305 I$="####.##"
310 IF A=I THEN PRINT "G  R  E  A  T":C=C+1
320 IF A<> ITHEN PRINT "ANSWER IS";:PRINTUSING I$;I
330 FOR Z=1 TO 500:NEXT Z
335 INPUT "WOULD YOU LIKE TO TRY AGAIN (Y/N)";Y$
337 IF Y$ = "Y" THEN GOTO 210
340 CLS:PRINT N$" YOU GOT"C"OUT OF "N"CORRECT"
```

```
100 REM **********************************************
110 REM *   CREDIT                APPLE/PET/TRS-80   *
120 REM **********************************************
130 REM
140 REM  --PROGRAM TO FIGURE INTEREST ON SINGLE
145 REM  PAYMENT LOANS.
150 REM
160 REM  FOR APPLE & PET:
165 REM  CHANGE CLS STATEMENTS TO:
170 REM    PRINT CHR$(147)--PET   HOME--APPLE
175 REM  OMIT LINE 285 & USING I$; ON LINE 290
180 REM  ON APPLE USE A SUBROUTINE FOR RND FUNCTION
185 REM
190 CLS
200 PRINT "THE COMPUTER WILL FIGURE INTEREST"
210 PRINT "*** PRINCIPAL X RATE X TIME ***"
220 PRINT:INPUT "ENTER THE PRINCIPAL";P
230 INPUT "ENTER THE INTEREST RATE";R
240 INPUT "ENTER THE TIME";T
250 INPUT "IS TIME MONTHS(M) OR YEARS(Y)";L$
260 R=R/100
270 IF L$="M" THEN R=R/12
280 I=P*T*R
285 I$="###.##"
290 PRINT "INTEREST IS $";USING I$;I
295 PRINT
300 INPUT "PRESS <ENTER> TO CONTINUE";N$
310 GOTO 190
```

```
10 REM **************************************************
11 REM *    CREDIT                             TRS-80   *
12 REM **************************************************
13 REM
14 REM --PROGRAM TO SHOW CREDIT CARD USAGE.
15 CLS
16 INPUT "WHAT IS YOUR NAME";N$
17 CLS
20 PRINTTAB(13)"C R E D I T   C A R D   U S E"
25 PRINTTAB(32)"PERCENT OF FAMILIES"
30 PRINTTAB(3)"ANNUAL FAMILY INCOME";TAB(32)"THAT USED CREDIT CARDS""
32 PRINT "--------------------------------------------------------"
40 PRINTTAB(3)"$5,000-$7,499";TAB(39)"39"
50 PRINTTAB(3)"$7,500-$9,999";TAB(39)"54"
60 PRINTTAB(3)"$10,000-$14,999";TAB(39)"67"
70 PRINTTAB(3)"$15,000-$19,999";TAB(39)"74"
80 PRINTTAB(3)"$20,000-$24,999";TAB(39)"84"
90 PRINTTAB(3)"$25,000 AND OVER";TAB(39)"81"
100 PRINT"-------------------------------------------------------"
101 PRINTTAB(8)"PLEASE INPUT ANSWER WITHOUT COMMAS"
105 IF X=>1 THEN GOTO 240
110 FOR X=1 TO 8
120 IF X=1 THEN PRINT @ 896,"WHICH INCOME GROUP USED CREDIT CARDS THE MOST";
130 IF X=2 THEN PRINT @ 896,"WHICH INCOME GROUP USED CREDIT CARDS THE LEAST";
140 IF X=3 THEN PRINT @ 896,"UP TO WHAT INCOME LEVEL DID FEWER THAN 50 PERCENT";
141 IF X=3 THEN PRINT @ 960,"OF FAMILIES USE CREDIT CARDS";
150 IF X=4 THEN PRINT @ 896,"ABOVE WHAT INCOME LEVEL DID MORE THAN 80 PERCENT";
151 IF X=4 THEN PRINT @ 960,"OF FAMILIES USE CREDIT CARDS";
170 IF X=5 THEN PRINT @ 896,"OUT OF EVERY 100 FAMILIES WITH ANNUAL INCOMES OF";
171 IF X=5 THEN PRINT @ 960,"$10,000 TO $14,000, HOW MANY USED CREDIT CARDS";
180 IF X=6 THEN PRINT @ 896,"AT WHAT INCOME LEVEL DID NEARLY 3 OUT OF EVERY 4";
181 IF X=6 THEN PRINT @ 960,"FAMILIES USE CREDIT CARDS";
190 IF X=7 THEN PRINT @ 896,"WHAT PERCENTAGE OF FAMILIES WITH INCOMES OF $7,500";
191 IF X=7 THEN PRINT @ 960,"TO 9,999 DID NOT USE CREDIT CARDS";
200 IF X=8 THEN PRINT @ 896,"ON THE AVERAGE, WHAT PERCENTAGE OF FAMILIES WITH ";
201 IF X=8 THEN PRINT @ 960,"ANNUAL INCOMES OF MORE THAN $5,000 USE CREDIT CARDS";
220 INPUT A$
222 READ B$
230 IF A$=B$ THEN PRINT @ 960,"RIGHT"ELSE PRINT @ 960,"TRY HARDER": C=C+1
232 FOR Y=1 TO 500: NEXT Y: CLS:GOTO 3
240 NEXT X
250 DATA 20000-24999,5000-7499,7500-9999,20000-24999,67,15
252 DATA 46,66.50
260 PRINT @ 960,"YOU GOT"; 8-C; "OUT OF 8 ";N$
```

```
100 REM *************************************************
110 REM *   CREDIT                    MODEL III-TRS-80    *
120 REM *************************************************
130 REM
140 REM  —PROGRAM DRAWS A CHART FOR STUDENTS TO STUDY
150 REM  AND ANSWER QUESTIONS.  SCORES STUDENTS.
160 REM
200 CLS
210 POKE 16916,7
220 PRINTTAB(19)"CONSUMER CREDIT OUTSTANDING"
230 PRINTTAB(2);"TYPE";TAB(10);" 1970";TAB(20);"1971";TAB(30);"1972";TAB(40);"1973";
240 PRINTTAB(50)"1974";TAB(59)"1975"
250 PRINT "---------------------------------------------------------------"
260 PRINT " INSTALL.";TAB(10);"101.0";TAB(20);"111.2";TAB(30)"126.7";
270 PRINTTAB(40)"146.4";TAB(50)"155.4";TAB(58)"162.2"
280 PRINT " NON-INS.";TAB(11);"25.1";TAB(21);"27.4";TAB(31);"30.5";TAB(41);"32.5";
290 PRINTTAB(51)"33.4";TAB(59)"35.0"
300 PRINT "  TOTAL";TAB(10);"127.0";TAB(20);"138.6";TAB(30);"157.2";
310 PRINTTAB(40)"178.9";TAB(50)"188.8";TAB(58)"197.2"
320 PRINT "  "
330 FOR X = 1 TO 4
340 READ Q$,A$
345 PRINT Q$;
350 INPUT I$
360 IF A$=I$ THEN PRINT "CORRECT":C=C+1
370 IF A$<>I$ THEN PRINT "ANSWER IS ";A$
380 FOR Z= 1 TO 500:NEXT Z:CLS
390 PRINT:PRINT
395 NEXT X
400 DATA DID THE TOTAL AMOUNT OF CONSUMER CREDIT INCREASE STEADILY FROM  1970-1975,YES
410 DATA WHICH YEAR DID CONSUMER CREDIT INCREASE THE MOST,1972
420 DATA WHAT WAS THE PERCENT OF INCREASE IN TOTAL CONSUMER CREDIT       FROM 1970-1975,25
430 DATA HOW MUCH LARGER WAS THE TOTAL AMOUNT OF CONSUMER CREDIT AT THE  END OF 1975 THAN 1970,70.2
435 INPUT "ENTER YOUR NAME PLEASE";N$
500 POKE 16916,0
510 CLS:PRINT N$ " YOU GOT"C" OUT OF 4 CORRECT"
```

```
100 REM  ****************************************************************
110 REM  *        CREDIT    SOURCES             APPLE/PET/TRS-80        *
120 REM  ****************************************************************
121 REM
122 REM  --PROGRAM TO TEST STUDENTS ON IDENTIFYING
123 REM  THE CHARACTERISTICS OF VARIOUS CREDIT SOURCES.
124 REM
125 REM  CHANGE CLS STATEMENTS TO:
126 REM     PRINT CHR$(147)--PET   HOME--APPLE
127 REM  LENGTH OF LINES MUST BE SHORTENED TO FIT ON APPLE/PET
128 REM  OMIT LINE 130 & 500
129 CLS
130 POKE 16916,7
140 PRINT "$$$$$$$$$$$$$$$$  C R E D I T    S O U R C E S  $$$$$$$$$$$$$$$$"
150 PRINT "SAVINGS AND LOAN ASSOCIATIONS..LIFE INSURANCE COMPANIES...BANKS"
160 PRINT "PAWNBROKERS.....CONSUMER FINANCE COMPANIES.....CREDIT UNIONS..."
165 PRINT
171 PRINT "$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$"
172 PRINT
173 INPUT "PLEASE ENTER YOUR NAME";N$
180 FOR X=1 TO 6
200 CLS:READ A$
210 DATA BANKS,LIFE INSURANCE COMPANIES,PAWNBROKERS,SAVINGS AND LOAN ASSOCIATIONS
211 DATA CREDIT UNIONS,CONSUMER FINANCE COMPANIES
220 DATA CONSUMER FINANCE COMPANIES,LIFE INSURANCE COMPANIES
230 IF X=1 THEN PRINT "EXTEND LOW INTEREST LOANS TO PEOPLE WITH GOOD CREDIT RATING"
240 IF X=2 THEN PRINT "MUST HAVE A POLICY ON WHICH TO BORROW";
250 IF X=3 THEN PRINT "WILL TAKE ANY VALUABLE ITEM AND LEND SMALL AMOUNTS ON IT.";
260 IF X=4 THEN PRINT "INTERESTED PRIMARILY IN MORTGAGE LOANS";
270 IF X=5 THEN PRINT "VERY LOW INTEREST RATE--TO MEMBERS ONLY";
280 IF X=6 THEN PRINT "GIVE SMALL LOANS TO HIGH-RISK PEOPLE  AT HIGH RATES";
290 INPUT B$
400 IF B$=A$ THEN PRINT "THAT'S RIGHT":C=C+1
405 IF B$<>A$ THEN PRINT N$" YOU NEED TO REVIEW THAT ONE! "
406 FOR Z=1 TO 500:NEXT Z
410 NEXT X
430 PRINT:PRINT:PRINT
440 CLS:PRINT "*** "N$"'S SCORE ***"
450 PRINT C" OUT OF 6  CORRECT"
460 PRINT:PRINT:PRINT:PRINT:PRINT
500 POKE 16916,0
```

```
100 REM ********************************************
110 REM *   CREDIT                        TRS-80   *
120 REM ********************************************
130 REM
140 REM --PROGRAM TO MIX UP WORDS AND HAVE STUDENTS
150 REM DETERMINE WHAT THEY ARE FROM CLUES.
210 CLS
220 PRINT "TRY TO DETERMINE WHAT CREDIT"
225 PRINT "TERM WE ARE TALKING ABOUT"
230 PRINT "BY USING THE CLUES.
235 PRINT
240 PRINT "KEY IN THE TERM YOU THINK IS CORRECT.
250 FOR Z=1 TO 1000:NEXT Z:CLS
260 INPUT "WHAT IS YOUR NAME";N$
270 INPUT "HOW MANY TERMS WOULD YOU LIKE TO DO";NT
275 IF NT>15 PRINT "REENTER--15 TERMS OR LESS":FOR Z=1 TO 600:NEXT:CLS:GOTO 270
280 RESTORE
290 FOR X= 1 TO NT
300 READ C$,T$,M$
310 IF T$="END" THEN RESTORE:GOTO 300
320 PRINT "YOUR CLUE---";C$
330 FOR Z=1 TO 700:NEXT Z
340 CLS
350 PRINT @ 340,;
360 FOR W=1 TO LEN(M$)
370 PRINT MID$(M$,W,1);"  ";
380 NEXT W
390 FOR Z= 1 TO 500:NEXT Z
400 CLS
410 PRINT "YOUR ANSWER IS---";:A$= "  ":INPUT A$
420 IF A$=T$ PRINT "THAT'S GREAT":C=C+1
430 IF A$<>T$ PRINT "INCORRECT---THE ANSWER IS ";T$
440 INPUT "PRESS ENTER TO CONTINUE";E$
450 NEXT X
460 PRINT N$" YOU GOT "C"CORRECT"
470 INPUT "WOULD YOU LIKE TO TRY AGAIN(Y/N)";R$
480 IF R$="Y" THEN C=0:GOTO 270
490 DATA RIGHT OF SELLER TO TAKE BACK GOODS NOT PAID FOR, REPOSSESS,PERESOSSS
500 DATA MEASURE OF ONE'S ABILITY TO OBTAIN CREDIT, CREDIT RATING, DCRIET GITNRA
510 DATA COST OF CREDIT, INTEREST, EETSRNIT
520 DATA PROPERTY USED AS SECURITY FOR A LOAN,COLLATERAL, RATECOLLAL
530 DATA RECEIVING GOODS AND PROMISING TO PAY LATER, CREDIT,RIDETC
540 DATA SOME PEOPLE USE CREDIT BECAUSE IT IS MORE ---,CONVENIENT,VENNOCIENT
550 DATA THE FACE OF A NOTE,PRINCIPAL,RACIILPNP
560 DATA EQUAL PAYMENTS, INSTALLMENT, MENSTALLTIN
570 DATA A PERSON'S EARNING POWER, CAPACITY, AACCIYTP
580 DATA A PERSON'S REPUTATION,CHARACTER, RATCACERH
590 DATA LOW INTEREST RATE LENDER,BANK,NABK
600 DATA PARTIAL PAYMENT MADE WHEN PURCHASED,DOWN PAYMENT,NWDO YATPNEM
610 DATA UNLICENSED LENDER,LOAN SHARK,NLOA SRAKH
620 DATA INABILITY TO PAY DEBTS, BANKRUPTCY,CUPTABYNKR
630 DATA LOAN ON A HOUSE,MORTGAGE,GOGAMTER
640 DATA END,END,END
```

```
10 REM **********************************************
20 REM *         COMPOUND INTEREST                  *
30 REM *  WRITTEN FOR THE TRS-80 MODEL I AND III    *
40 REM **********************************************
50 REM  THIS PROGRAM FIGURES INTEREST COMPOUNDED ON YEARLY, SEMI-ANNUALLY,
   QUARTERLY, MONTHLY, WEEKLY, DAILY, AND HOURLY.
60 CLS
70 PRINT "RATE OF INTEREST - ENTER AS DECIMAL "
80 INPUT "                    10% AS .10";R
90 INPUT"AMOUNT OF PRINCIPAL";P
100 CLS
110 READ N
120 IF N=0 THEN 210
130 PRINT "COMPOUNDED";N;"TIMES PER YEAR."
140 PRINT "VALUE AFTER 5 YEARS IS ";
150 LET C=5*N
160 PRINT USING "$$##,###.##";P*(1+R/N)[C
170 PRINT
180 FOR X=1 TO 500:NEXT X
190 GOTO 110
200 DATA 1,2,4,12,52,365,8760,0
210 END
```

```
10 REM **********************************************
20 REM *         COMPOUND INTEREST                  *
30 REM *    WRITTEN FOR THE TRS-80 MODEL III        *
40 REM **********************************************
50 REM  THIS PROGRAM FIGURES INTEREST COMPOUNDED ON YEARLY, SEMI-ANNUALLY, QUART
ERLY, MONTHLY, WEEKLY, DAILY, AND HOURLY.
60 PRINT "RATE OF INTEREST - ENTER AS DECIMAL "
70 INPUT "                    10% AS .10";R
80 INPUT"AMOUNT OF PRINCIPAL";P
90 READ N
100 IF N=0 THEN 210
110 PRINT "COMPOUNDED";N;"TIMES PER YEAR."
120 PRINT "VALUE AFTER 5 YEARS IS";
130 LET C=5*N
140 CLS
150 PRINT P*(1+R/N)[C
160 PRINT
170 FOR X=1 TO 500:NEXT X
180 GOTO 90
190 IF A$="Y" THEN GOTO 90
200 DATA 1,2,4,12,52,365,8760,0
210 END
```

```
10 REM ****************************************************
20 REM *   PROGRAM TO CALCULATE   INTEREST                *
30 REM *                          PRINCIPLE               *
40 REM *                          RATE                    *
50 REM *                                  OR TIME         *
60 REM *   WRITTEN FOR THE TRS-80 MODELS I OR III         *
70 REM ****************************************************
80 CLS
90 FOR X = 1 TO 5:PRINT:NEXT X
100 PRINT TAB(23)"***   MENU   ***
110 PRINT
120 PRINT TAB(15)"TYPE @1' TO CALCULATE INTEREST
130 PRINT TAB(15)"TYPE @2' TO CALCULATE PRINCIPLE
140 PRINT TAB(15)"TYPE @3' TO CALCULATE RATE
150 PRINT TAB(15)"TYPE @4' TO CALCULATE TIME
160 PRINT TAB(15)"TYPE @5' TO EXIT PROGRAM
170 INPUT M
180 ON M GOTO 200  ,280  ,370  ,450  ,540
190 CLS
200 INPUT "PRINCIPLE IS";A
210 INPUT "RATE IS (ENTER AS DECIMAL--10% AS .10)";B
220 INPUT "TIME IS (ENTER AS NUMBER OF DAYS)";C
230 CLS
240 LET N=A*B*C/360
250 PRINT"THE INTEREST ON $";A;" AT ";B*100;"% FOR ";C;"DAYS IS ";
260 PRINT USING "$$##,###.##";N
270 GOTO 90
280 INPUT "INTEREST IS";A
290 INPUT "RATE IS (ENTER AS DECIMAL--10% AS .10)";B
300 INPUT "TIME IS (ENTER AS NUMBER OF DAYS)";C
310 CLS
320 LET L=A/(B*C/360)
330 PRINT "THE PRINCIPLE NEEDED TO EARN $";A;" INTEREST AT A RATE"
340 PRINT "OF";B*100;"% FOR ";C;"DAYS IS $";
350 PRINT USING "$$##,###.##";L
360 GOTO 90
370 INPUT "INTEREST IS";A
380 INPUT "PRINCIPLE IS";B
390 INPUT "TIME IS (ENTER AS NUMBER OF DAYS)";C
400 CLS
410 LET E=(A/(B*C/360))*100
420 PRINT "THE RATE NEEDED TO EARN $";A;" INTEREST ON A $";B
430 PRINT "PRINCIPLE FOR ";C;" DAYS IS ";E;"%"
440 GOTO 90
450 INPUT "INTEREST IS";A
460 INPUT "PRINCIPLE IS";B
470 INPUT "RATE IS (ENTER AS DECIMAL--10% AS .10)";C
480 CLS
490 LET Q=(A/(B*C))*360
500 LET M=INT(Q+.5)
510 PRINT "THE TIME NEEDED TO EARN $";A;" INTEREST ON A "
520 PRINT "$";B;"PRINCIPLE AT A RATE OF ";C*100;"% IS";M;" DAYS"
530 GOTO 90
540 PRINT "END OF PROGRAM"
```

```
10 REM *********************************************************
20 REM *   PROGRAM TO PRINT AN AMORTIZATION SCHEDULE           *
30 REM *   WRITTEN FOR THE TRS-80 MODEL III                    *
40 REM *********************************************************
50 P$ = "###.##"
60 T$ = "##,###.##"
70 REM     P = MONTHLY PAYMENT IN $
80 REM    I = MONTHLY INTEREST PAYMENT IN $
90 REM    T = MONTHLY PAYMENT TOWARD PRINCIPAL IN $
100 REM  ********     INPUT DATA FOR LOAN    ********
110 INPUT "AMOUNT OF LOAN"; A
120 INPUT "INTEREST RATE - GIVE RATE WITHOUT % SIGN OR DECIMAL";R
130 INPUT "LIFE OF LOAN IN YEARS";Y
140 INPUT "NAME OF BORROWER";N$
150 O$ = "AMOUNT OF LOAN "
160 S$ = "MONTHLY PAYMENT "
170 INPUT "ADDRESS OF BORROWER";M$
180 INPUT  "CITY";Q$
190 INPUT "STATE";R$
200 REM      *******      PERFORM COMPUTATIONS      *******
210 N = Y * 12
220 MI = R/100/12
230 B = A
240 I = MI * A
250 P = MI * A * ((1+MI)[N / ((1+MI)[N -1))
260 REM        *********    TO PRINT HEADING INFORMATION    ********
270 LPRINT CHR$(27);CHR$(14)TAB(12) "AMORITIZATION SCHEDULE";CHR$(27);CHR$(15)
280 LPRINT " "
290 LPRINT TAB(12)N$;TAB(48)O$;
300 LPRINT USING T$;A
310 LPRINT TAB(12) M$, TAB(48)S$;:LPRINT USING P$;P
320 LPRINT TAB(12)Q$; " ";R$;TAB(48)"ANNUAL INTEREST RATE";R;"%"
330 LPRINT CHR$(138)
340 LPRINT "*********************************************************************
*******"
350 LPRINT "PAYMENT";
360 LPRINT TAB(11) "PAYMENT ON";
370 LPRINT TAB(27) "AMOUNT OF";
380 LPRINT TAB(48) "TOTAL";
390 LPRINT TAB(67) "BALANCE"
400 LPRINT "NUMBER";
410 LPRINT TAB(11) "PRINCIPAL";
420 LPRINT TAB(27) "INTEREST";
430 LPRINT TAB(48) "INTEREST";
440 LPRINT TAB(67) "OF LOAN"
450 LPRINT "=====================================================================
======="
460 REM ********    FOR NEXT LOOP COMPUTE TOTALS AND PRINT DATA   *******
470 P$ = "###.##"
480 T$ = "##,###.##"
490 FOR X = 1 TO N
500    I = MI * B
510     TI = TI + I
520     T = P - I
530     B = B - T
540        LPRINT X;
550        LPRINT TAB(12) USING P$;T;
560         LPRINT TAB(28) USING P$;I;
570         LPRINT TAB(47) USING T$;TI;
580         LPRINT TAB(66) USING T$;B
590 NEXT X
10 REM LOANS
20 REM WRITTEN FOR THE ATARI
30 PRINT "}":REM CLEAR SCREEN
40 PRINT "TYPE IN THE AMOUNT OF MONEY YOU WANT"
50 PRINT "TO BORROW AND I WILL SHOW YOU"
60 PRINT "THE MONTHLY PAYMENTS."
70 PRINT
80 PRINT
90 PRINT
200 ? " AMOUNT BORROWED $ ";:INPUT P
300 ? " ANNUAL INTEREST % ";:INPUT I
400 ? " NUMBER OF PAYMENTS ";:INPUT N
500 I=0.01*(I/12)
600 M=(P*I)/(1-((1+I)^(-N)))
700 ?
800 ? " MONTHLY PAYMENT IS $";M
900 PRINT :PRINT :PRINT
1000 GOTO 200
```

---

```
10 REM *PRINCIPAL AND INTEREST
20 REM *WRITTEN FOR THE ATARI
30 PRINT "}":REM *CLEAR THE SCREEN
40 PRINT "   PRINCIPAL & INTERST"
50 PRINT
60 PRINT
70 PRINT "PRINCIPAL";:INPUT P
80 PRINT "INTEREST RATE";:INPUT R
90 LET N=1
100 PRINT
110 LET A=P*(1+R/100)^N
120 PRINT "YEAR =";N
130 PRINT "AMOUNT =";A
140 LET N=N+1
150 GOTO 100
200 REM TO STOP PUSH BREAK KEY
```

```
10 REM ****************************************************
20 REM *   PROGRAM TO CALCULATE SALES COMMISSION          *
25 REM *   WRITTEN FOR THE TRS-80 MODEL III               *
30 REM ****************************************************
40 A$="##,###.##"
50 CLS
60 INPUT "HOW MANY PROBLEMS ARE TO BE WORKED";N
70 CLS
80 FOR X=1 TO N
90 INPUT "AMOUNT OF SALE";S
100 INPUT "RATE OF COMMISSION";R
110 C=S*R/100
120 PRINT:PRINT
130 PRINT "   SALES","RATE","COMMISSION
140 PRINT USING A$;S;
150 PRINT TAB(16)R;"%",
160 PRINT USING A$;C
170 PRINT:PRINT
180 NEXT X
```

```
100 REM ****************************************************
110 REM *   SALES COMMISSION               APPLE/PET       *
120 REM ****************************************************
130 REM
140 REM  PROGRAM TO FIGURE SALES COMMISSION
150 REM
180 REM   CHANGE HOME STATEMENTS TO:
190 REM      PRINT CHR$(147)--PET
210 HOME
220 INPUT "HOW MANY PROBLEMS ARE TO BE WORKED";N
230 HOME
240 FOR X=1 TO N
250 INPUT "AMOUNT OF SALES";S
260 INPUT "RATE OF COMMISSION";R
270 C=S*R/100
280 PRINT:PRINT
290 PRINT "SALES","RATE","COMMISSION"
300 PRINT S,R,C
330 PRINT:PRINT
340 NEXT X
```

```
10   REM  *******************************************************
20   REM  *       SALES COMMISSION                      APPLE II    *
30   REM  *******************************************************
50   HOME
60   INPUT "HOW MANY PROBLEMS ARE TO BE WORKED? ";N
70   HOME
80   FOR X = 1 TO N
90   INPUT "AMOUNT OF SALE ";S
100  INPUT "RATE OF COMMISSION ";R
110 C = S * R / 100
120  PRINT : PRINT
130  PRINT " SALES","RATE" SPC( 10)"COMMISSION"
140  PRINT "$ ";S;
150  PRINT  TAB( 18)R;"%",
160  PRINT "$ ";C
170  PRINT : PRINT
180  NEXT X
```

```
10 REM ************************************************
20 REM *  COMPUTATION OF DEPRECIATION BY FIVE METHODS *
25 REM *  WRITTEN FOR THE TRS-80 MODEL III            *
30 REM ************************************************
40 REM COST=C
50 REM YEARS=Y
60 REM SALVAGE VALUE=S
70 REM CURRENT VALUE AFTER ANNUAL DEPRECIATION=CV
80 REM METHOD INDEX=I
90 REM ANNUAL DEPRECIATION FOR FIVE METHODS=D1,D2,D3,D4,D5
100 CLS
110 PRINT "     **********  MENU  **********":PRINT " "
120 PRINT "TYPE '1' FOR STRAIGHT LINE METHOD"
130 PRINT "TYPE '2' FOR DOUBLE DECLINING BALANCE METHOD"
140 PRINT "TYPE '3' FOR SUM-OF-THE-YEARS'-DIGITS METHOD"
150 PRINT "TYPE '4' FOR PRODUCTION-UNIT METHOD"
160 PRINT "TYPE '5' FOR ACRS (ACCELERATED COST RECOVERY SYSTEM) METHOD"
170 PRINT "TYPE '6' TO EXIT PROGRAM":INPUT I
180 IF I<1 OR I>6 THEN GOTO 110
190 CLS:INPUT "COST";C
200 INPUT "SALVAGE VALUE";S
210 PRINT "LIFE OF PROPERTY"
220 INPUT "IF USING ACRS METHOD, LIFE MUST BE 3, 5, OR 10 YRS";Y
230 A$="##"
240 B$="#,###.##"
250 C$="##,###.##"
260 FOR J=1 TO 6:LPRINT " ":NEXT J:CLS
270 ON I GOTO 280  ,310  ,340  ,370  ,390  ,1600
280 LPRINT CHR$(27);CHR$(14)TAB(11)"STRAIGHT LINE METHOD";CHR$(27);CHR$(15)
290 LPRINT " "
300 GOTO 410
310 LPRINT CHR$(27);CHR$(14)TAB(6)"DOUBLE DECLINING BALANCE METHOD";CHR$(27);CHR
$(15)
320 LPRINT " "
330 GOTO 410
340 LPRINT CHR$(27);CHR$(14)TAB(6)"SUM-OF-THE-YEARS'-DIGITS METHOD";CHR$(27);CHR
$(15)
350 LPRINT " "
360 GOTO 410
370 LPRINT CHR$(27);CHR$(14)TAB(10) "PRODUCTION-UNIT METHOD";CHR$(27);CHR$(15)
380 LPRINT " ":GOTO 410
390 LPRINT CHR$(27);CHR$(14)TAB(17) "ACRS METHOD";CHR$(27);CHR$(15)
400 LPRINT " "
410 LPRINT TAB(10)CHR$(15);"END OF YEAR",TAB(35)"DEPRECIATION",TAB(55)"CURRENT V
ALUE";CHR$(14)
420 C = C-S
430 D1 = C/Y
440 R=0
450 R=R+1
460 ON I GOTO 480  , 580  ,740  ,900  ,1070
```

(Continued on next page)

```
470 REM *********************************************
480 REM STRAIGHT LINE METHOD
490 REM *********************************************
500 LET C=C-D1
510 CV=C+S
520 LPRINT TAB(15) USING A$;R;
530 LPRINT TAB(35) USING B$;D1;
540 LPRINT TAB(57) USING C$;CV
550 IF R < Y THEN GOTO 450
560 GOTO 1600
570 REM *********************************************
580 REM DOUBLE DECLINING BALANCE METHOD
590 REM *********************************************
600 PRINT C
610 IF R>1 THEN GOTO 630
620 C=C+S
630 LET D2 = (2/Y)*C
640 C1=C
650 C = C-D2
660 LPRINT TAB(15) USING A$; R;
670 IF C<S THEN 700
680 LPRINT TAB(35) USING B$; D2;
690 LPRINT TAB(57) USING C$; C:GOTO450
700 LPRINT TAB(35) USING B$;C1-S;
710 LPRINT TAB(57) USING C$;S
720 GOTO 1600
730 REM *********************************************
740 REM SUM-OF-THE-YEARS'-DIGITS METHOD
750 REM *********************************************
760 FOR X = 1 TO Y
770 Z = Z+X
780 NEXT X
790 DU=C/Z
800 FOR CY = Y TO 1 STEP -1
810 D3 = CY*DU
820 C = C-D3
830 LY = LY +1
840 CV = C +S
850 LPRINT TAB(15) USING A$;LY;
860 LPRINT TAB(35) USING B$;D3;
870 LPRINT TAB(57) USING C$;CV
880 NEXT CY
890 GOTO 1600
900 REM ************************************
910 REM PRODUCTION-UNIT METHOD
920 REM ************************************
930 INPUT "NUMBER OF LIFETIME PRODUCTION UNITS";U
940 R = C/U
950 CV=C+S
960 INPUT "UNITS PRODUCED";UP
970 IF TU+UP>U THEN UP=U-TU:GOTO 990
980 TU = TU + UP
990 D4=UP*R
1000 L = L+1
1010 CV=CV-D4
1020 LPRINT TAB(15) USING A$;L;
1030 LPRINT TAB(35) USING B$;D4;
1040 LPRINT TAB(57) USING C$;CV
1050 IF CV=S GOTO  1600
1060  GOTO 960
```

(Continued on next page)

```
1070 REM **********************************
1080 REM ACRS METHOD
1090 REM **********************************
1100 C=C+S
1110 IF Y = 3 THEN GOTO 1140
1120 IF Y = 5 THEN GOTO 1270
1130 IF Y = 10 THEN GOTO 1410
1140 D5=C*.25:CV=C-D5
1150 LPRINT TAB(15) " 1";
1160 LPRINT TAB(35) USING B$;D5;
1170 LPRINT TAB(57) USING C$;CV
1180 D5=C*.38:CV=CV-D5
1190 LPRINT TAB(15) " 2";
1200 LPRINT TAB(35) USING B$;D5;
1210 LPRINT TAB(57) USING C$;CV
1220 D5=C*.37:CV=CV-D5
1230 LPRINT TAB(15) " 3";
1240 LPRINT TAB(35) USING B$;D5;
1250 LPRINT TAB(57) USING C$;CV
1260 GOTO 1600
1270 LPRINT TAB(15)" 1";
1280 LPRINT TAB(35) USING B$;C*.15;
1290 LPRINT TAB(57) USING C$;C-C*.15
1300 LPRINT TAB(15)" 2";
1310 LPRINT TAB(35) USING B$;C*.22;
1320 LPRINT TAB(57) USING C$;C-C*.37
1330 CV=C-C*.37
1340 FOR X = 3 TO 5
1350 D=C*.21
1360 CV=CV-D
1370 LPRINT TAB(15)X;TAB(35)USING B$;D;
1380 LPRINT TAB(57)USING C$;CV
1390 NEXT X
1400 GOTO 1600
1410 LPRINT TAB(15)" 1";TAB(35) USING B$;C*.08;
1420 LPRINT TAB(57) USING C$;C-C*.08
1430 LPRINT TAB(15)" 2";TAB(35) USING B$;C*.14;
1440 LPRINT TAB(57) USING C$;C-C*.22
1450 LPRINT TAB(15)" 3";TAB(35) USING B$;C*.12;
1460 LPRINT TAB(57) USING C$;C-C*.34
1470 CV=C-C*.34
1480 FOR X = 4 TO 6
1490 D=C*.10
1500 LPRINT TAB(15)X;TAB(35)USING B$;D;
1510 LPRINT TAB(57)USING C$;CV
1520 CV=CV-D
1530 NEXT X
1540 FOR X=7 TO 10
1550 D=C*.09
1560 LPRINT TAB(15)X;TAB(35)USING B$;D;
1570 LPRINT TAB(57)USING C$;CV
1580 CV=CV-D
1590 NEXT X
1600 END
```

```
100 REM  *********************************************
110 REM  *  ECONOMICS                         TRS-80 *
120 REM  *********************************************
130 REM
140 REM --PROGRAM TO PRINT OUT CONVERSION TABLE FOR
150 REM CURRENCY BEING CHANGED FROM DOLLARS TO FOREIGN
160 REM CURRENCY.
210 CLS
220 INPUT "WHAT IS THE CURRENCY";C$
230 INPUT "WHAT IS THE EXCHANGE RATE";R
240 PRINTTAB(15)"DOLLAR";TAB(33)C$
250 PRINT
260 FOR X=5 TO 100 STEP 5
265 F$="###.##"
270 PRINTTAB(17)X;TAB(33);:PRINT USING F$;X*R
280 NEXT X
```

```
10 REM ************************************************
20 REM *   INFLATION CHAPTER 1 SHELLY/CASHMAN         *
30 REM *   WRITTEN FOR THE TRS-80 MODEL I OR III      *
40 REM ************************************************
50 REM THIS SIMULATION PROGRAM FOR CHAPTER 1 OF THIS BOOK
60 REM INTRODUCTION TO COMPUTERS AND DATA PROCESSING
70 REM CALCULATES THE INFLATION VALUES USING AN INFLATION
80 REM RATE AND A VALUE ENTERED BY THE OPERATOR.
90 REM THE BEGINNING YEAR IS ALSO ENTERED BY THE OPERATOR.
100 REM THE VALUES ARE CALCULATED FROM THE YEAR ENTERED
110 REM THROUGH THE YEAR 2000.
120 REM VARIABLE NAMES:
130 REM   Y.....YEAR ENTERED
140 REM   I.....INFLATION RATE ENTERED
150 REM   V.....VALUE ENTERED
160 REM   V2....CALCULATED VALUE
170 REM   A$....RESPONSE FOR MORE VALUES
180 REM   V1(.).TABLE TO HOLD CALCULATED VALUES
190 REM   Y1(.).TABLE TO HOLD YEARS TO BE PRINTED
200 REM   S1....SUBSCRIPT TO REFERENCE FIRST COLUMN TO BE PRINTED
210 REM   S2....SUBSCRIPT TO REFERENCE SECOND COLUMN TO BE PRINTED
220 REM   S3....SUBSCRIPT TO REFERENCE TABLE WHEN CALCULATIONS ARE PERFORMED
230 REM   S4....SUBSCRIPT USED TO SET TABLES TO ZERO
240 REM   Y2....YEAR USED FOR CALCULATIONS CONTROL
250 REM   W1....WORK AREA FOR FINDING NUMBER OF LINES TO PRINT
260 REM   W2....WORK AREA FOR FINDING TOP OF SECOND LINE
270 DIM Y1(22), V1(22)
280 LET A$ = " "
290 IF A$ = "N" THEN 1060
300 CLS
310 PRINT "INTRODUCTION TO COMPUTERS AND"
320 PRINT "     DATA PROCESSING"
330 PRINT "SHELLY/CASHMAN...ANAHEIM PUBLISHING CO."
340 PRINT "CHAPTER 1 - PROJECT 7"
350 PRINT "CALCULATING EFFECTS OF INFLATION"
360 PRINT " "
370 PRINT "ENTER YEAR ";
380 LET Y = 0
390 INPUT Y
400 IF Y < 1980 OR Y > 2000 THEN 420
410 GOTO 440
420 PRINT "INVALID YEAR - REENTER ";
430 GOTO 390
440 PRINT "ENTER VALUE ";
450 LET V = 0
460 INPUT V
470 IF V < 1 OR V > 1000000 THEN 490
480    GOTO 510
490 PRINT "INVALID VALUE - REENTER ";
500    GOTO 460
510 PRINT "ENTER INFLATION RATE ";
520 LET I = -1
530 INPUT I
```

(Continued on next page)

```
540 IF I < 0 OR I > 25 THEN 560
550    GOTO 580
560 PRINT "INVALID RATE - REENTER ";
570    GOTO 530
580 PRINT " "
590 PRINT " YEAR", "       VALUE",
600 PRINT " YEAR", "       VALUE"
610 PRINT " "
620 FOR S4 = 1 TO 22
630    LET Y1(S4) = 0
640    LET V1(S4) = 0
650 NEXT S4
660 LET Y2 = Y
670 LET S3 = 1
680 IF Y2 > 2000 THEN 760
690    LET Y1(S3) = Y2
700    LET V1(S3) = V
710    LET V2 = V * (I/100)
720    LET V = V + V2
730    LET Y2 = Y2 + 1
740    LET S3 = S3 + 1
750 GOTO 680
760 LET S1 = 1
770 LET W1 = (2000-Y) + 1
780 LET W2 = W1 /2
790 IF W2 > INT(W1/2) THEN 820
800    LET S2 = W2 + 1
810    GOTO 840
820 LET S2 = INT(W2) + 2
830 GOTO 840
840 IF Y1(S2) = 0 THEN 930
850    PRINT Y1(S1),
860    PRINT USING "##,###,###.##"; V1(S1),
870    PRINT " ",
880    PRINT Y1(S2),
890    PRINT USING "##,###,###.##"; V1(S2)
900    LET S1 = S1 + 1
910    LET S2 = S2 + 1
920 GOTO 840
930 IF W2 > INT(W1/2) THEN 950
940    GOTO 970
950 PRINT Y1(S1),
960 PRINT USING "##,###,###.##"; V1(S1)
970 PRINT " "
980 PRINT "MORE VALUES TO ENTER?"
990 PRINT "   Y (YES) OR N (NO) ";
1000 LET A$ = " "
1010 INPUT A$
1020 IF A$ = "Y" OR A$ = "N" THEN 1050
1030    PRINT "INVALID ENTRY - REENTER ";
1040 GOTO 1010
1050 GOTO 290
1060 PRINT " "
1070 PRINT "END OF INFLATION PROJECT"
1080 PRINT " "
1090 END
```

---

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```
100 REM *************************************************
110 REM *  ENGLISH USAGE               APPLE/PET/TRS-80 *
120 REM *************************************************
130 REM
140 REM   --THIS PROGRAM WILL DRILL STUDENTS ON
150 REM   COMMONLY MISSPELLED  BUSINESS   WORDS
160 REM   THE WORDS  IN THE DATA  STATEMENT MAY
170 REM   BE CHANGED TO  DRILL STUDENTS  ON NEW
180 REM   WORDS. ON APPLE CHANGE CLS TO 'HOME'.
190 REM
200 REM   CHANGE ALL THE CLS STATEMENTS TO:
210 REM     PRINT CHR$(147)---PET   HOME---APPLE
220 REM
225 CLS
230 PRINT "              S P E L L I N G    D R I L L"
240 PRINT:PRINT
250 FOR X=1 TO 20
260 READ S$
270 PRINT "SPELL ";S$
280 FOR Z=1 TO 500:NEXT Z
290 CLS
300 INPUT A$
310 IF A$=S$ THEN PRINT "CORRECT":C=C+1
320 IF A$<>S$ THEN PRINT "WRONG"
330 FOR Z=1 TO 500:NEXT Z
340 CLS
350 DATA MICROCOMPUTER,BOOKKEEPER
355 DATA BANKRUPTCY,BUSINESS
360 DATA COMMITTEE,COLLATERAL
365 DATA WARRANTY,SUCCEED,OFFICIAL
370 DATA NEGOTIATE,OCCASION,PERSONNEL
375 DATA ENTERPRISE,EXPENDITURE
380 DATA MANAGEMENT,OCCURRENCE,REFERENCE
385 DATA CONVENIENCE,COMPENSATION,EDIT
390 NEXT X
400 CLS
410 PRINT "NUMBER OF CORRECT ANSWERS----";C
420 PRINT:PRINT
430 IF C=20 THEN PRINT "S U P E R I O R   W O R K !!"
440 IF C>=16 AND C<20 THEN PRINT "G O O D  W O R K  !!"
450 IF C>=12 AND C<16 THEN PRINT "F A I R  W O R K  !!"
460 IF C<12 THEN PRINT "S T U D Y   A N D   T R Y   A G A I N"
470 FOR X=1 TO 150:NEXT
480 CLS
490 GOTO 410
```

```
100 REM ***********************************************************
110 REM *  ENGLISH USAGE                                TRS-80      *
120 REM ***********************************************************
130 REM
140 REM  --THIS PROGRAM WILL INTRODUCE THE RULES
150 REM  FOR COMMA PUNCTUATION USED IN SHORTHAND.
170 REM
240 PRINT" , A P P O S I T I O N"
250 PRINT"A WORD, PHRASE OR CLAUSE USED TO EXPLAIN OTHER"
260 PRINT"TERMS(THAT IS, AN EXPRESSION IN APPOSITION)"
270 PRINT"SHOULD BE SET OFF BY COMMAS. WHEN AN EXPRESSION"
280 PRINT"IN APPOSITION OCCURS IN THE END OF A SENTENCE"
290 PRINT"ONE COMMA ONLY IS NECESSARY."
300 PRINT
310 PRINT"FOR EXAMPLE:  MY MOTHER, EVELYN FRANK, IS A MEMBER OF THE PTA."
320 FOR X=1 TO7500:NEXT X:CLS
330 PRINT",  A S   C L A U S E"
340 PRINT"A COMMA SEPARATES A SUBORDINATE CLAUSE INTRODUCED"
350 PRINT"BY `AS' AND IS FOLLOWED BY A MAIN CLAUSE."
360 PRINT
370 PRINT"FOR EXAMPLE:  AS YOU KNOW, I HAVE NOT YET RECIEVED"
380 PRINT"              MY SHAREHOLDERS CARD."
390 FOR X=1TO7500:NEXTX:CLS
400 PRINT",  W H E N   C L A U S E"
410 PRINT"A CLAUSE THAT IS INTRODUCED BY `WHEN' AND FOLLOWED"
420 PRINT"BY THE MAIN CLAUSE IS SEPARATED FROM THE MAIN CLAUSE"
430 PRINT"BY A COMMA."
440 PRINT
450 PRINT"FOR EXAMPLE:  WHEN I WAS IN DALLAS, I ATTENDED A FUNERAL."
460 FORX=1TO7500:NEXTX:CLS
470 PRINT",  I N T R O D U C T O R Y"
480 PRINT"COMMAS ARE USED TO SEPARATE SUBORDINATE CLAUSES FROM"
490 PRINT"MAIN CLAUSES."
500 PRINT
510 PRINT"FOR EXAMPLE:  BEFORE SIGNING THE CONTRACT, DISCUSS"
520 PRINT"              IT WITH YOUR LAWYER."
530 FORX=1TO7500:NEXTX:CLS
540 PRINT",  C O N J U N C T I O N"
550 PRINT"A COMMA IS USED TO SEPARATE TWO INDEPENDENT CLAUSES"
560 PRINT"JOINED BY: AND, BUT, OR, FOR AND NOR."
570 PRINT
580 PRINT"FOR EXAMPLE:  THERE ARE 127 SENIORS, BUT ONLY THREE"
590 PRINT"              ARE HERE NOW."
600 FORX=1TO7500:NEXTX:CLS
610 PRINT",  A N D  O M I T T E D"
620 PRINT"WHEN A NOUN IS MODIFIED BY TWO OR MORE ADJECTIVES,"
630 PRINT"THEY ARE SEPARATED BY COMMAS."
640 PRINT
650 PRINT"FOR EXAMPLE:  A STAMPED, SELF-ADDRESSED ENVELOPE IS"
660 PRINT"              ENCLOSED."
670 FORX=1TO7500:NEXTX:CLS
680 PRINT",  I F   C L A U S E"
690 PRINT"A SUBORDINATE THAT IS FOLLOWED BY A MAIN CLAUSE"
700 PRINT"IS SEPARATED FROM THE MAIN CLAUSE BY A COMMA."
710 PRINT"SUBORDINATE CLAUSES ARE OFTEN INTRODUCED BY"
720 PRINT"IF, AS, WHEN, THOUGH, ALTHOUGH, BECAUSE AND OTHERS."
730 PRINT
740 PRINT"FOR EXAMPLE:  IF YOU GET OFF WORK BEFORE SIX-THIRTY,"
750 PRINT"              CALL ME."
760 FORX=1TO7500:NEXTX:CLS
770 PRINT",  P A R E N T H E T I C A L"
780 PRINT"A WORD OR PHRASE THAT IS NOT NECESSARY TO THE"
790 PRINT"GRAMMATICAL COMPLETENESS OF THE SENTENCE SHOULD"
800 PRINT"BE SET OFF BY COMMAS.  IF THE EXPRESSION OCCURS"
810 PRINT"AT THE END OF THE SENTENCE, USE ONLY ONE COMMA."
820 PRINT
```

(Continued on next page)

```
830 PRINT"FOR EXAMPLE:  THERE IS, OF COURSE, A CHARGE FOR"
840 PRINT"              OUR SERVICES."
850 FORX=1TO7500:NEXTX:CLS
860 PRINT",  S E R I E S"
870 PRINT"WHEN THE LAST MEMBER OF A SERIES OF THREE OR MORE ITEMS"
880 PRINT"IS FOLLOWED BY `AND' OR `OR', PLACE A COMMA BEFORE THE"
890 PRINT"CONJUNCTION AS WELL AS BETWEEN THE OTHER ITEMS."
900 PRINT
910 PRINT"FOR EXAMPLE:  HE RECIEVED A SHIRT, A COAT, AND A TIE"
920 PRINT"              FOR HIS BIRTHDAY."
930 FOR X=1 TO 7500:NEXT X:CLS
940 CLS:PRINT N$" ***INTRODUCTORY ON COMMA PUNCTUATION COMPLETED***"
```

```
100 REM ******************************************************
110 REM *    INSURANCE                              TRS-80   *
120 REM ******************************************************
130 REM
140 REM --PROGRAM TO SHOW CASE STUDY OF ACCIDENT AND
150 REM SHOW INSURANCE COVERAGES.
160 REM
220 CLS:INPUT "ENTER NAME YOUR NAME PLEASE";N$
230 FOR X= 1 TO 5
240 CLS:PRINT:PRINT:PRINTTAB(15);"TYPE";TAB(41)"YEARLY COST"
250 PRINT "COMPREHENSIVE PHYSICAL DAMAGE ............$29.00"
260 PRINT "BODILY INJURY LIABILITY (20/40)...........$85.00"
270 PRINT "PROPERTY DAMAGE LIABILITY ($5,000)........$40.00"
280 PRINT "COLLISION ($100 DEDUCTIBLE)...............$61.00"
290 PRINT
300 PRINT "AS A RESULT OF AN ACCIDENT IN WHICH MR. STEARN WAS"
310 PRINT "AT FAULT,  THE DRIVER OF THE OTHER CAR WAS AWARDED"
320 PRINT "$4,700 FOR  INJURIES AND $1,250 FOR DAMAGES TO HIS "
330 PRINT "CAR. MR. STEARN'S CAR WAS DAMAGED TO THE EXTENT OF"
340 PRINT "$815.  HOW MUCH DID  THE INSURANCE COMPANY PAY FOR"
350 PRINT "THE ACCIDENT."
360 PRINT:PRINT
370 READ Q$,A$
380 PRINT Q$;
390 INPUT S$
400 IF A$=S$ THEN PRINT "CORRECT":C=C+1
410 IF A$<>S$ THEN PRINT "THE ANSWER IS ";A$
420 FOR Z= 1 TO 500 :NEXT Z
430 CLS
440 NEXT X
450 DATA BODILY INJURY,4700,PROPERTY DAMAGE,1250
460 DATA COLLISION,715,TOTAL PAID BY INSURANCE, 6665
470 DATA HOW MANY YEARS'S PREMIUMS WOULD THIS REPRESENT,31
480 PRINT N$" YOU GOT"C"OUT OF 5 CORRECT"
```

```
100 REM *********************************************
110 REM *  INSURANCE                    TRS-80      *
120 REM *********************************************
130 REM
140 REM  --PROGRAM TO PRINT PERCENTAGE OF ACCIDENTS
150 REM  ACCORDING TO AGE GROUPS.  CHANGE PRINT STATEMENTS
160 REM  STARTING ON LINE 440 TO LPRINT TO OBTAIN A PRINTOUT.
190 CLS
200 PRINT "THIS PROGRAM WILL FIGURE THE PERCENTAGE OF ACCIDENTS BY AGE"
210 PRINT "GROUPS AS FOLLOWS:  16-25 26-25 36-45 46-55 56-65 AND OVER 65."
220 PRINT
230 PRINT "THE COMPUTER WILL PRINT THE DIFFERENT AGE GROUPS AND"
240 PRINT "YOU WILL TYPE IN THE NUMBER OF ACCIDENTS THAT GROUP HAD."
250 PRINT @ 465,"HIT ANY KEY TO CONTINUE"
260 A$=INKEY$:IF A$=""THEN 260
270 CLS
280 INPUT "TOTAL ACCIDENTS FOR AGES 16-25 IS ";G1
290 INPUT "TOTAL ACCIDNETS FOR AGES 26-35 IS ";G2
300 INPUT "TOTAL ACCIDENTS FOR AGES 36-45 IS ";G3
310 INPUT "TOTAL ACCIDENTS FOR AGES 46-55 IS ";G4
320 INPUT "TOTAL ACCIDENTS FOR AGES 56-65 IS ";G5
330 INPUT "TOTAL ACCIDENTS FOR AGES OVER 65 IS ";G6
340 T=G1+G2+G3+G4+G5+G6
350 P1=G1/T:P1=P1*100
360 P2=G2/T:P2=P2*100
370 P3=G3/T:P3=P3*100
380 P4=G4/T:P4=P4*100
390 P5=G5/T:P5=P5*100
400 P6=G6/T:P6=P6*100
410 CLS
420 Z$="THE PENCENTAGE OF ACCIDENTS FOR AGES "
430 Q$="##.##"
440 PRINT TAB(47) "PERCENTAGE"
450 PRINT "AGE GROUP"TAB(15),"NUMBER OF ACCIDENTS"TAB(40),"OF TOTAL"
460 PRINT
470 PRINT "  16-25   "TAB(15),"     "G1 TAB(40),"  ";:PRINT USING Q$;P1
480 PRINT "  26-35  "TAB(15),"     "G2 TAB(40),"  ";:PRINT USING Q$;P2
490 PRINT "  36-45  "TAB(15),"     "G3 TAB(40),"  ";:PRINT USING Q$;P3
500 PRINT "  46-55  "TAB(15),"     "G4 TAB(40),"  ";:PRINT USING Q$;P4
510 PRINT "  56-65  "TAB(15),"     "G5 TAB(40),"  ";:PRINT USING Q$;P5
520 PRINT " OVER 65  "TAB(15),"     "G6 TAB(40),"  ";:PRINT USING Q$;P6
530 PRINT TAB(20)"-----"
540 PRINT "TOTAL ACCIDENTS ARE "TAB(20)T
```

```
100 REM *******************************************
110 REM *    INSURANCE                   TRS-80   *
120 REM *******************************************
130 REM
140 REM --PROGRAM TO MIX UP WORDS AND HAVE STUDENTS
150 REM DETERMINE WHAT THEY ARE FROM CLUES.
210 CLS
220 PRINT "TRY TO DETERMINE WHAT INSURANCE "
225 PRINT "TERM WE ARE TALKING ABOUT"
230 PRINT "BY USING THE CLUES.
235 PRINT
240 PRINT "KEY IN THE TERM YOU THINK IS CORRECT.
250 FOR Z=1 TO 1000:NEXT Z:CLS
260 INPUT "WHAT IS YOUR NAME";N$
270 INPUT "HOW MANY TERMS WOULD YOU LIKE TO DO";NT
275 IF NT>10 PRINT "REENTER--10 TERMS OR LESS":FOR Z=1 TO 600:NEXT:CLS:GOTO 270
280 RESTORE
290 FOR X= 1 TO NT
300 READ C$,T$,M$
310 IF T$="END" THEN RESTORE:GOTO 300
320 PRINT "YOUR CLUE---";C$
330 FOR Z=1 TO 700:NEXT Z
340 CLS
350 PRINT @ 340,;
360 FOR W=1 TO LEN(M$)
370 PRINT MID$(M$,W,1);"  ";
380 NEXT W
390 FOR Z= 1 TO 500:NEXT Z
400 CLS
410 PRINT "YOUR ANSWER IS---";:A$= "  ":INPUT A$
420 IF A$=T$ PRINT "THAT'S GREAT":C=C+1
430 IF A$<>T$ PRINT "INCORRECT---THE ANSWER IS ";T$
440 INPUT "PRESS ENTER TO CONTINUE";E$
450 NEXT X
460 PRINT N$" YOU GOT "C"CORRECT"
470 INPUT "WOULD YOU LIKE TO TRY AGAIN(Y/N)";R$
480 IF R$="Y" THEN C=0:GOTO 270
490 DATA AMOUNT PAID FOR INSURANCE,PREMIUM,MIMRPEU
500 DATA PERSON NAMED TO RECEIVE INSURANCE BENEFITS,BENEFICIARY,NEFICBEIARY
510 DATA REQUEST FOR PAYMENT DUE TO LOSS,CLAIM,LAIMC
520 DATA DECREASE IN VALUE OF PROPERTY DUE TO USE & TIME,DEPRECIATION,TPECRDEIIONA
530 DATA PROPERTY NOT ATTACHED TO LAND,PERSONAL,SANOPERL
540 DATA PROPERTY ATTACHED TO LAND,REAL,ALER
550 DATA NECESSARY FOR CLAIM ON HOUSEHOLD GOODS,INVENTORY,TENINYORV
560 DATA RISK OF LOSING SOMETHING OF VALUE,ECONOMIC,COCOMNIE
570 DATA LOSSES NOT COVERED BELOW A CERTAIN AMOUNT,DEDUCTIBLE,UCTIDEDBLE
580 DATA INSURANCE WHICH ALLOWS EACH INSURANCE COMPANY TO PAY PART OF THE LOSSES,NO-FAULT,TAUL-FON
590 DATA END,END,END
```

```
100 REM ***************************************************
110 REM *   INSURANCE                   MODEL III TRS-80  *
120 REM ***************************************************
130 REM
140 REM --PROGRAM TO EDUCATE STUDENTS ON PROPER STEPS
150 REM TO TAKE AFTER AN ACCIDENT HAS OCCURRED.
160 CLS
170 INPUT "PLEASE ENTER YOUR NAME";N$
180 CLS
190 POKE 16916,7
195 PRINT "***********************************"
200 PRINT "* FAULT      MODEL       HURT     *    A C C I D E N T"
210 PRINT "*    INSURANCE     ADDRESS        *"
220 PRINT "* ACCIDENT   WITNESSES   ACCUSE *        Q U I Z"
230 PRINT "*      POLICE        AGENT        *"
240 PRINT "***********************************"
250 PRINT
260 PRINT "ENTER ANSWERS EXACTLY AS THEY ARE"
270 PRINT "WRITTEN AT THE TOP OF THE SCREEN."
280 FOR Z=1 TO 800:NEXT:CLS
290 CLS
300 FOR X=1 TO 10
310 READ D$
320 IF X=1 THEN PRINT "FIRST CHECK TO SEE IF ANYONE IS ------";
330 IF X=2 THEN PRINT "THEN CALL THE ---------";
340 IF X=3 THEN PRINT "GET THE NAME AND ------- OF THE OTHER DRIVER";
350 IF X=4 THEN PRINT "WRITE DOWN THE ------- AND MAKE OF THE OTHER CAR";
360 IF X=5 THEN PRINT "GET NAMES AND ADDRESSES OF ----------";
370 IF X=6 THEN PRINT "IT IS NOT A GOOD IDEA TO ADMIT YOU WERE AT -------";
380 IF X=7 THEN PRINT "DO NOT TELL THE OTHER DRIVER HOW MUCH ----- YOU HAVE";
390 IF X=8 THEN PRINT "DO NOT ------- THE OTHER DRIVER OF CAUSING THE ACCIDENT";
400 IF X=9 THEN PRINT "REPORT THE ------- QUICKLY TO YOUR INSURANCE AGENT";
410 IF X=10 THEN PRINT "YOUR INSURANCE ------ CAN TELL YOU IF YOU NEED TO FILL"
420 IF X=10 THEN PRINT "OUT AN  ACCIDENT REPORT";
430 INPUT A$
435 PRINT
440 IF A$=D$ THEN PRINT ,"CORRECT":C=C+1
450 IF A$<>D$ THEN PRINT, "INCORRECT"
460 FOR Z=1 TO 500:NEXT:CLS
470 NEXT X
480 DATA HURT,POLICE,ADDRESS,MODEL,WITNESSES
490 DATA FAULT,INSURANCE,ACCUSE,ACCIDENT,AGENT
500 CLS:PRINT N$; " YOU GOT";C;"OUT OF 10 CORRECT"
510 FOR Z=1 TO 6:PRINT:NEXT
520 POKE 16916,0
```

```
100 REM ****************************************************
110 REM *  INSURANCE                  MODEL III TRS-80     *
120 REM ****************************************************
130 REM
140 REM --PROGRAM TO SHOW THE RELATIONSHIP OF THE AMOUNT
150 REM SPENT ON MEDICAL CARE TO THE AMOUNT PAID BY INSURANCE.
160 REM
198 CLS
200 INPUT "PLEASE TYPE IN YOUR NAME AND PRESS <ENTER>";N$
210 CLS
220 POKE 16916,7
230 PRINT"   CONSUMER HEALTH CARE COST (IN MILLIONS)"
240 PRINTTAB(16);"COSTS";TAB(25)"PAID BY INSURANCE"
250 PRINT "--------------------------------------------"
260 PRINT "HOSPITAL","19,492","80.6%"
270 PRINT "DOCTORS","15,417","53.1%"
280 PRINT "TOTAL","58,358","44.2%"
290 PRINT "--------------------------------------------"
300 PRINT:PRINT:PRINT"READ THE CHART ABOVE AND ANSWER THE FOLLOWING"
305 INPUT "QUESTIONS.  PRESS <ENTER> TO BEGIN";A
310 FOR X = 1 TO 10
320 CLS
330 READ Q$,A$
340 PRINT:PRINT:PRINT "ENTER ANSWERS WITHOUT COMMAS PLEASE."
350 PRINT Q$
360 INPUT Z$
370 IF Z$=A$ THEN PRINT "G R E A T":C=C+1
380 IF Z$<>A$ THEN PRINT "THE ANSWER IS ";A$
385 N=N+1
390 FOR W = 1 TO 500:NEXT W
400 NEXT X
405 CLS:PRINT:PRINT:PRINT N$;" YOUR SCORE IS ";INT(C/N*100)
407 POKE 16916,0
410 DATA "WHAT WAS SPENT FOR HOSPITAL CARE","19492"
420 DATA "WHAT PERCENT WAS NOT COVERED BY INSURANCE","19.4"
430 DATA "WHAT WAS SPENT FOR DOCTOR'S CARE","15417"
440 DATA "WHAT PERCENT WAS COVERED BY INSURANCE","53.1"
450 DATA "WHAT WAS HIGHER DOCTOR OR HOSPITAL CARE","HOSPITAL"
460 DATA "WHICH COST WAS COVERED BETTER BY INSURANCE","HOSPITAL"
470 DATA "WHAT WAS THE TOTAL SPENT FOR HEALTH CARE","58358"
480 DATA "WHAT PERCENT WAS COVERED BY INSURANCE","44.2"
490 DATA "DID INSURANCE PAY FOR HALF OF HEALTH CARE EXPENSES","NO"
500 DATA "WHAT PERCENT OF HEALTH CARE DID INSURANCE NOT COVER","55.8"
```

```
100 REM **************************************************
110 REM *   INSURANCE            APPLE/PET/TRS-80        *
120 REM **************************************************
130 REM
140 REM  --PROGRAM TO SHOW THE EFFECTS OF ALCOHOL CONSUMPTION
150 REM  IN AUTO ACCIDENTS.
160 REM
170 REM   CLS STATEMENTS SHOULD BE CHANGED TO:
180 REM    PRINT CHR$(147)--PET   HOME--APPLE
200 CLS
210 PRINT "THIS PROGRAM WILL COMPARE THE"
215 PRINT "OCCURRENCE OF TRAFFIC DEATHS"
220 PRINT "IN WHICH THE DRIVER WAS OPERATING"
225 PRINT "A VEHICLE UNDER THE INFLUENCE"
230 PRINT "OF ALCOHOL TO THE OCCURRENCE OF"
240 PRINT "TRAFFIC DEATHS IN WHICH ALCOHOL"
245 PRINT "WAS NOT A FACTOR."
250 PRINT
260 INPUT "ENTER NAME OF LOCALE"; L$
270 PRINT
280 PRINT "ENTER NUMBER OF ACCIDENTS IN THIS"
285 INPUT "LOCALE INVOLVING DRUNK DRIVERS";D1
290 PRINT
300 PRINT "ENTER NUMBER OF ACCIDENTS IN SAME "
305 INPUT "LOCALE NOT INVOLVING DRUNK DRIVERS";D2
310 T=D1+D2
320 P=D1/T*100
330 PA=D2/T*100
340 PRINT
350 PRINT "OF THE " T " ACCIDENTS OCCURRING IN " L$ ","
360 PRINT P "PERCENT INVOLVED DRIVERS OPERATING "
370 PRINT "VEHICLE UNDER THE INFLUENCE OF ALCOHOL."
380 END
```

```
10 REM *************************************************
20 REM *   PROGRAM TO COMPUTE   CASH                   *
30 REM *                        TRADE                  *
40 REM *                        CHAIN DISCOUNTS        *
50 REM *                               ON INVOICES     *
60 REM *   PROGRAM WRITTEN FOR TRS-80 MODELS I AND III *
70 REM *************************************************
80 CLEAR 500:CLS
90 PRINT "     *****     MENU   *****"
100 PRINT
110 PRINT"TYPE '1' TO CALCULATE CASH DISCOUNT"
120 PRINT"TYPE '2' TO CALCULATE TRADE DISCOUNT"
130 PRINT"TYPE '3' TO CALCULATE CHAIN DISCOUNT"
140 INPUT R
150 ON R GOTO 180  ,280  ,420  ,1030
160 REM      *********   CASH DISCOUNT   ********
170 X=0
180 CLS:PRINT"ROUTINE TO CALCULATE CASH DISCOUNT":PRINT
190 X=X+1
200 INPUT"AMOUNT OF INVOICE";A(X)
210 INPUT"RATE OF DISCOUNT";RA(X)
220 DA(X)=A(X)*(RA(X)/100)
230 FA(X)=A(X)-DA(X)
240 PRINT"ARE THERE MORE PROBLEMS TO WORK--( Y OR N )"
250 I$=INKEY$:IF I$="Y" THEN GOTO 190
260 IF I$="N" THEN 710  ELSE 250
270 REM      ******   TRADE DISCOUNT     *******
280 X=0
290 CLS:PRINT"ROUTINE TO CALCULATE TRADE DISCOUNT":PRINT
300 X=X+1
310 INPUT"AMOUNT OF INVOICE";A(X)
320 INPUT"RATE OF DISCOUNT";RB(X)
330 DB(X)=A(X)*(RB(X)/100)
340 NA(X)=A(X)-DB(X)
350 PRINT
360 PRINT"ARE THERE MORE PROBLEMS TO WORK--( Y OR N )"
370 I$=INKEY$:IFI$="Y" THEN GOTO 300
380 IF I$="N" THEN GOTO 850  ELSE 370
390 REM      *******   CHAIN DISCOUNT    *******
400 X=0
410 CLS:PRINT"ROUTINE TO CALCULATE CHAIN DISCOUNT":PRINT
420 X=X+1
430 INPUT"AMOUNT OF INVOICE";A(X)
440 NB=A(X)
450 FOR Y=1 TO 3
460   PRINT "ENTER RATE OF DISCOUNT"
470   INPUT RC
480   D=NB*(RC/100)
490 DC(X)=DC(X)+D
500 NB=NB-D
510 NEXT Y
520 NA(X)=A(X)-DC(X)
530 PRINT"ARE THERE MORE PROBLEMS TO WORK--( Y OR N )"
540 I$=INKEY$:IFI$="Y" THEN GOTO 420
550 IF I$="N" THEN 570  ELSE 540
```

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150

```
560 REM  *****   TO PRINT OUTPUT FOR CHAIN DISCOUNTS   *****
570 CLS
580 PRINT"  INVOICE";TAB(16)"DISCOUNT";TAB(37)"NET"
590 PRINT"   AMOUNT";TAB(18)"AMOUNT";TAB(34)"AMOUNT"
600 PRINT
610 FOR Z=1 TO X
620 PRINT USING "#,###.##";A(Z);
630 PRINT TAB(16)USING"#,###.##";DC(Z);
640 PRINT TAB(32)USING"#,###.##";NA(Z)
650 TD=TD+DC(Z)
660 TN=TN+NA(Z)
670 TA=TA+A(Z)
680 NEXT Z
690 GOTO 980
700 REM  *******   TO PRINT OUTPUT FOR CASH DISCOUNTS   *******
710 CLS
720 PRINT"  INVOICE";TAB(16)"DISCOUNT";TAB(37)"NET"
730 PRINT"   AMOUNT";TAB(18)"AMOUNT";TAB(34)"AMOUNT"
740 PRINT
750 FOR Z=1 TO X
760 PRINT USING"##,###.##";A(Z);
770 PRINT TAB(16)USING"#,###.##";DA(Z);
780 PRINT TAB(32)USING"#,###.##";FA(Z)
790 TD=TD+DA(Z)
800 TN=TN+FA(Z)
810 TA=TA+A(Z)
820 NEXT Z
830 GOTO 980
840 REM  *****   TO PRINT OUTPUT FOR TRADE DISCOUNTS  *****
850 CLS
860 PRINT"  INVOICE";TAB(16)"DISCOUNT";TAB(37)"NET"
870 PRINT"   AMOUNT";TAB(18)"AMOUNT";TAB(34)"AMOUNT"
880 PRINT
890 FOR Z = 1 TO X
900 PRINT USING "##,###.##";A(Z);
910 PRINT TAB(16)USING "#,###.##";DB(Z);
920 PRINT TAB(32)USING "#,###.##";NA(Z)
930 TD=TD+DB(Z)
940 TN=TN+NA(Z)
950 TA=TA+A(Z)
960 NEXT Z
970 REM  *****   TO PRINT TOTALS   *****
980 PRINT "----------","----------","----------"
990 PRINT USING "##,###.##";TA,
1000 PRINT TAB(15)USING "##,###.##";TD,
1010 PRINT TAB(31)USING "##,###.##";TN
1020 PRINT "==========","==========","=========="
1030 END
```

```
10 REM ******************************************************
20 REM *  THIS PROGRAM CALCULATES THE PERCENTAGE OF         *
30 REM *     INCREASE OR DECREASE                           *
40 REM *     WRITTEN FOR THE TRS-80 MODELS I AND III        *
50 REM ******************************************************
60 CLEAR 500
70 CLS
80 PRINT:PRINT:PRINT:PRINT:PRINT:PRINT
90 PRINT TAB(15)"THIS PROGRAM ACCEPTS TWO VALUES"
100 PRINT TAB(15)"AND FINDS THE PERCENTAGE OF"
110 PRINT TAB(15)"INCREASE OR DECREASE BETWEEN THEM."
120 FOR X=1 TO 1000:NEXT X:CLS
130 A$="CURRENT VALUE"
140 B$="PREVIOUS VALUE"
150 C$="PERCENT OF INCREASE"
160 D$="PERCENT OF DECREASE"
170 E$="###,###.##"
180 F$="###.##"
190 CLS
200 PRINT"<ENTER> THE VALUES AS THEY ARE REQUESTED.   IF NO VALUE OR":PRINT" A Z
ERO IS ENTERED, YOU WILL BE ASKED TO REENTER THE VALUE.":PRINT:PRINT:PRINT
210 PRINT TAB(5 ) "WHAT IS THE CURRENT VALUE";:INPUT CV
220 IF CV=0 THEN 210
230 PRINT:PRINT TAB(5)"WHAT IS THE PREVIOUS VALUE";:INPUT PV
240 IF PV=0 THEN 230
250 D=CV-PV
260 PC=(D/PV)*100
270 CLS:PRINT TAB(15)"THIS IS THE SOLUTION TO YOUR VALUES"
280 PRINT TAB(15)STRING$(35,42):PRINT:PRINT:PRINT TAB(15) STRING$(35,42)
290 PRINT TAB(4) A$;TAB(24)B$;
300 IF PC>1 THEN PRINT TAB(45)C$ ELSE PRINT TAB(45)D$
310 PRINT TAB(3)USING E$;CV;
320 PRINT TAB(24)USING E$;PV;
330 PRINT TAB(51)USING F$;PC;:PRINT"%"
340 PRINT TAB(15)STRING$(35,42):PRINT:PRINT
350 PRINT TAB(9)"TO CONTINUE THE PROGRAM IN THIS MANNER, STRIKE 'C'."
360 PRINT TAB(15)"IF YOU ARE FINISHED, PLEASE STRIKE 'S'."
370 PRINT TAB(15) STRING$(35,42)
380 I$=INKEY$:IF I$="C" THEN 190
390 IF I$="S"THEN 410  ELSE 380
400 PRINT STRING$(35,42)
410 PRINT TAB(8)"THANK YOU, PLEASE REMOVE THE DISK FROM THE DISK DRIVE"
```

```
100 REM ***********************************************
110 REM *  LAW                   APPLE/PET/TRS-80     *
120 REM ***********************************************
130 REM
140 REM  --PROGRAM TO IDENTIFY ELIGIBLE VOTERS
150 REM
153 REM  CHANGE THE CLS STATEMENT IN LINE 158 TO:
155 REM      PRINT CHR$(147)---PET   HOME---APPLE
158 CLS
160 INPUT "ENTER YOUR NAME";N$
170 INPUT "ENTER YOUR AGE";A
180 IF A<18 PRINT "IT WILL BE";18-A;" MORE YEARS "
185 IF A<18 PRINT "BEFORE YOU MAY VOTE."
190 IF A=>18 PRINT"YOU ARE ELIGIBLE TO VOTE NOW."
```

```
10 REM ************************************************
20 REM *   PROGRAM TO PRINT OUT AN INCOME STATEMENT   *
30 REM *   OR A COST OF MERCHANDISE SOLD STATEMENT    *
40 REM *   WRITTEN FOR TRS-80 MODEL III COMPUTER      *
50 REM ************************************************
60 CLEAR 500
70 A$="###,###.##"
80 B$="#,###.##"
90 CLS
100 INPUT "BUSINESS NAME";N$
110 INPUT "LENGTH OF FISCAL PERIOD";T$
120 INPUT "TYPE CURRENT MONTH AND DAY (EX: DECEMBER 31)";D$
130 CLS
140 FOR X = 1 TO 6
150  LPRINT " "
160 NEXT X
170 PRINT "TYPE @1' TO PRINT A COST OF MERCHANDISE SOLD REPORT"
180 PRINT "TYPE @2' TO PRINT AN INCOME STATEMENT"
190 INPUT N
200 INPUT "BEGINNING INVENTORY";BI
210 INPUT "TOTAL PURCHASES";P
220 INPUT "PURCHASE RETURNS & ALLOWANCES (0 IF NONE)";PR
230 INPUT "PURCHASE DISCOUNT (0 IF NONE)";PD
240 INPUT "ENDING INVENTORY";EI
250 ON N GOTO 390  ,260
260 INPUT "TOTAL SALES";S
270 INPUT "SALES RETURNS & ALLOWANCES (0 IF NONE)";SR
280 INPUT "SALES DISCOUNT (0 IF NONE)";SD
290 INPUT "ADVERTISING EXPENSE (0 IF NONE)";A
300 INPUT "BAD DEBTS EXPENSE (0 IF NONE)";BD
310 INPUT "DELIVERY EXPENSE (0 IF NONE)";D
320 INPUT "DEPRECIATION EXPENSE (0 IF NONE)";DP
330 INPUT "INSURANCE EXPENSE (0 IF NONE)";I
340 INPUT "MISCELLANEOUS EXPENSE (0 IF NONE)";M
350 INPUT "PAYROLL TAXES EXPENSE (0 IF NONE)";PE
360 INPUT "RENT EXPENSE (0 IF NONE)";R
370 INPUT "SALARY EXPENSE (0 OF NONE)";SE
380 INPUT "SUPPLIES EXPENSE (0 IF NONE)";SU
390 NS=S-SR-SD
400 NP=P-PR-PD
410 C=BI+NP-EI
420 GP=NS-C
430 OE=A+BD+D+DP+I+M+PE+R+SE+SU
440 NI=GP-OE
450 ON N GOTO 460  ,680
460 LPRINT TAB((80-LEN(N$))/2)N$
470 LPRINT TAB(21)"STATEMENT OF COST OF MERCHANDISE SOLD"
480 LPRINT TAB(22)"FOR THE ";T$;" ENDED ";D$;", 1982"
490 LPRINT STRING$(80,"=")
500 LPRINT TAB(6)"BEGINNING MERCHANDISE INVENTORY";TAB(59)USING A$;BI
510 LPRINT TAB(6)"PURCHASES";TAB(49)USINGA$;P
520 IF PR>0 AND PD>0 THEN 550
530 IF PR>0 AND PD=0 THEN LPRINT TAB(9)"PURCHASE RETURNS/ALLOWANCES";TAB(51)USIN
G B$;PR:LPRINT TAB(49)"-----------":GOTO 590
540 IF PD>0 AND PR=0 THEN LPRINT TAB(9)"PURCHASE DISCCOUNT";TAB(51)USING B$;PD:L
PRINT TAB(49)"-----------":GOTO 590
```

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```
550 LPRINT TAB(9)"PURCHASE RETURNS/ALLOWANCES";TAB(40)USING B$;PR
560 LPRINT TAB(9)"PURCHASE DISCOUNT";TAB(40)USING B$;PD;
570 LPRINT TAB(51)USING B$;PR+PD
580 IF PD>0 OR PR>0 THEN LPRINT TAB(40)"---------";TAB(51)"---------"
590 IF PD>0 OR PR>0 THEN LPRINT TAB(6)"NET PURCHASES";TAB(59)USING A$;NP
600 LPRINT TAB(59)"----------"
610 LPRINT TAB(6)"TOTAL COST OF MERCHANDISE AVAILABLE FOR SALE";TAB(59)USING A$;
BI+NP
620 LPRINT TAB(6)"MERCHANDISE INVENTORY ";D$;" ,1982";TAB(59)USING A$;EI
630 LPRINT TAB(59)"----------"
640 LPRINT TAB(6)"COST OF MERCHANDISE SOLD";TAB(70) USING A$;C
650 ON N GOTO 660  , 870
660 LPRINT TAB(70)"=========="
670 IF N = 1 THEN1070
680 LPRINT TAB((80-LEN(N$))/2)N$
690 LPRINT TAB(32)"INCOME STATEMENT"
700 LPRINT TAB(22)"FOR THE ";T$;" ENDED ";D$;", 1982"
710 LPRINT STRING$(80,"=")
720 LPRINT "REVENUE:"
730 LPRINT TAB(6)"SALES";TAB(59)USING A$;S
740 IF SR>0 AND SD>0 THEN 790
750 IF SR>0 AND SD=0 THEN LPRINT TAB(6)"SALES RETURNS & ALLOWANCES";TAB(61)USING
 B$;SR
760 LPRINT TAB(59)"----------":GOTO 830
770 IF SR=0 AND SD>0 THEN LPRINT TAB(6)"SALES DISCOUNT";TAB(61)USING B$;SD
780 LPRINT TAB(59)"----------":GOTO 830
790 LPRINT TAB(6)"SALES RETURNS AND ALLOWANCES";TAB(50)USING B$;SR
800 LPRINT TAB(6)"SALES DISCOUNT";TAB(50)USING B$;SD;
810 LPRINT TAB(61)USING B$;SD+SR
820 LPRINT TAB(50)"---------";TAB(59)"----------"
830 LPRINT TAB(6)"NET SALES";TAB(70)USING A$;NS
840 LPRINT " "
850 LPRINT "COST OF MERCHANDISE SOLD:"
860 GOTO 500
870 LPRINT TAB(70)"----------"
880 LPRINT TAB(6)"GROSS PROFIT ON OPERATIONS";TAB(70)USING A$;GP
890 LPRINT " "
900 LPRINT "OPERATING EXPENSES"
910 IF A>0 THEN LPRINT TAB(6)"ADVERTISING EXPENSES";TAB(61)USING B$;A
920 IF BD>9 THEN LPRINT TAB(6)"BAD DEBT EXPENSE";TAB(61)USING B$;BD
930 IF D>0 THEN LPRINT TAB(6)"DELIVERY EXPENSE";TAB(61)USING B$;D
940 IF DP>0 THEN LPRINT TAB(6)"DEPRECIATION EXPENSE";TAB(59)USING A$;DP
950 IF I>0 THEN LPRINT TAB(6)"INSURANCE EXPENSE";TAB(59)USING A$;I
960 IF M>0 THEN LPRINT TAB(6)"MISCELLANEOUS EXPENSE";TAB(61)USING B$;M
970 IF PE>0 THEN LPRINT TAB(6)"PAYROLL TAXES EXPENSE";TAB(61)USING B$;PE
980 IF R>0 THEN LPRINT TAB(6)"RENT EXPENSE";TAB(59)USING A$;R
990 IF SE>0 THEN LPRINT TAB(6)"SALARY EXPENSE";TAB(59)USING A$;SE
1000 IF SU>0 THEN LPRINT TAB(6)"SUPPLIES EXPENSE";TAB(61)USING B$;SU
1010 LPRINT TAB(59)"----------"
1020 LPRINT TAB(6)"TOTAL OPERATING EXPENSE";TAB(70)USING A$;OE
1030 LPRINT TAB(70)"----------"
1040 IF NI >=0 THEN LPRINT "NET INCOME";TAB(70)USING A$;NI
1050 IF NI < 0 THEN LPRINT "NET LOSS";TAB(70)USING A$;NI
1060 LPRINT TAB(40)STRING$(40,"=")
1070 END
```

```
10 REM ***************************************************
20 REM *   PROGRAM TO CALCULATE MARKUP AND MARKDOWN      *
30 REM *   WRITTEN FOR THE TRS-80 MODEL III              *
40 REM ***************************************************
50 CLS
60 PRINT"THIS PROGRAM WILL PERFORM THREE OPERATIONS."
70 PRINT"YOU MAY CHOOSE FROM THE MENU TO CALCULATE"
80 PRINT"MARKUP BASED ON COST--"
90 PRINT"MARKUP BASED ON SELLING PRICE--"
100 PRINT"OR MARKDOWN BASED ON SELLING PRICE."
110 PRINT" "
120 PRINT" "
130 A$="#,#####.##"
140 PRINT"          ***** MENU *****"
150 PRINT" "
160 PRINT"TYPE @1' TO CALCULATE MARKUP BASED ON COST AND <ENTER>"
170 PRINT"TYPE @2' TO CALCULATE MARKUP BASED ON SELLING PRICE AND <ENTER>"
180 PRINT"TYPE @3' TO CALCULATE MARKDOWN BASED ON SELLING PRICE AND <ENTER"
190 PRINT"TYPE @0' TO EXIT THE PROGRAM IF FINISHED AND <ENTER>"
200 INPUT M
210 CLS
220 ON M GOTO 250  ,370  ,490  ,230
230 CLS
240 PRINT "END OF MARKUP/MARKDOWN PROGRAM":END
250 PRINT "TYPE COST VALUE OR"
260 INPUT "TYPE 0 IF FINISHED";C1
270 IF C1=0 THEN CLS:GOTO140
280 INPUT"TYPE % OF MARKUP AS A DECIMAL-EXAMPLE: 20% AS .20 AND ENTER";R1
290 MU=C1*R1:S1=C1+MU
300 PRINT" "
310 PRINT "    COST   --   MARKUP   --   SELLING PRICE"
320 PRINT USINGA$;C1;
330 PRINT TAB(13)USINGA$;MU;
340 PRINT TAB(29)USINGA$;S1
350 PRINT" "
360 GOTO 250
370 PRINT" ":PRINT "TYPE COST VALUE OR"
380 INPUT "TYPE 0 IF FINISHED AND <ENTER>";C2
390 IF C2 = 0 THEN CLS:GOTO 140
400 INPUT "TYPE % OF MARKUP AS A DECIMAL--EXAMPLE: 20% AS .20--AND <ENTER>";R2
410 S2=C2/(1.00-R2):MU=S2-C2
420 PRINT" "
430 PRINT "      COST   --    MARKUP   --   SELLING PRICE"
440 PRINT USING A$;C2;
450 PRINTTAB(14)USING A$;MU;
460 PRINT TAB(31)USING A$;S2
470 PRINT " "
480 GOTO 370
490 PRINT " ":PRINT " ":PRINT "TYPE SELLING PRICE OR"
500 INPUT "TYPE 0 IF FINISHED AND <ENTER>";S3
510 IF S3=0 THEN CLS:GOTO 140
520 INPUT "TYPE % OF MARKDOWN AS A DECIMAL--EXAMPLE: 20% AS .20--AND <ENTER>";R3
530 S4=S3-S3*R3:MD=S3-S4
540 PRINT" "
550 PRINT"SELLING PRICE   --   MARKDOWN   --   SALE PRICE"
560 PRINT USING A$;S3;
570 PRINT TAB(16)USING A$;MD;
580 PRINT TAB(35)USING A$;S4
590 GOTO 490
```

```
10  REM *******************************************************
20  REM *    MARKUP/MARKDOWN                    APPLE II      *
30  REM *******************************************************
40  HOME
50  PRINT "THIS PROGRAM WILL PERFORM THREE"
55  PRINT " OPERATIONS.": PRINT
60  PRINT "YOU MAY CHOOSE FROM THE MENU TO"
65  PRINT " CALCULATE:": PRINT
70  PRINT "MARKUP BASED ON COST--"
80  PRINT "MARKUP BASED ON SELLING PRICE--"
90  PRINT "OR MARKDOWN BASED ON SELLING PRICE."
100  PRINT " "
110  PRINT " "
130  PRINT "        ***** MENU *****"
140  PRINT " "
150  PRINT "TYPE '1' TO CALCULATE MARKUP BASED ON"
155  PRINT "         COST AND <RETURN>"
160  PRINT "TYPE '2' TO CALCULATE MARKUP BASED ON"
165  PRINT "         SELLING PRICE AND <RETURN>"
170  PRINT "TYPE '3' TO CALCULATE MARKDOWN BASED ON"
175  PRINT "         SELLING PRICE AND <RETURN>"
180  PRINT "TYPE '0' TO EXIT THE PROGRAM IF"
185  PRINT "         FINISHED AND <RETURN>"
190  INPUT M
200  ON M GOTO 230,350,470,210
210  HOME
220  PRINT "END OF MARKUP/MARKDOWN PROGRAM": END
230  PRINT "TYPE COST VALUE OR"
240  INPUT "TYPE 0 IF FINISHED AND <RETURN> ";C1
250  IF C1 = 0 THEN  HOME : GOTO 130
260  INPUT "TYPE % OF MARKUP AS A DECIMAL-EXAMPLE:  20% AS .20 AND <RETURN
     > ";R1
270 MU = C1 * R1:S1 = C1 + MU
280  PRINT " "
290  PRINT " COST   --   MARKUP  --   SELLING PRICE"
300  PRINT "$ ";C1;
305 MU =  INT (100 * MU + 0.5) / 100
310  PRINT  TAB( 15)MU;
315 S1 =  INT (100 * S1 + 0.5) / 100
320  PRINT  TAB( 29)"$ ";S1
330  PRINT " "
340  GOTO 230
350  PRINT " ": PRINT "TYPE COST VALUE OR"
360  INPUT "TYPE 0 IF FINISHED AND <RETURN> ";C2
370  IF C2 = 0 THEN  HOME : GOTO 130
380  INPUT "TYPE % OF MARKUP AS A DECIMAL--EXAMPLE:  20% AS .20--AND <RETU
     RN>";R2
390 S2 = C2 / (1.00 - R2):MU = S2 - C2
400  PRINT " "
410  PRINT "  COST  --   MARKUP  --   SELLING PRICE"
420  PRINT "$ ";C2;
425 MU =  INT (100 * MU + 0.5) / 100
430  PRINT  TAB( 15)MU;
435 S2 =  INT (100 * S2 + 0.5) / 100
440  PRINT  TAB( 30)"$ ";S2
450  PRINT " "
```

```
10 REM ***************************************************
20 REM *    PAYROLL PROGRAM TO CALCULATE GROSS PAY          *
30 REM *    PROGRAM WILL TAKE 10 EMPLOYEES AND              *I
40 REM *    SHOW RESULTS ON THE SCREEN                      *
50 REM *    WRITTEN FOR THE TRS-80 MODEL III                *
60 REM ***************************************************
70 A$="#,###.##"
80 CLS
90 INPUT "HOW MANY EMPLOYEES";N
100 FOR X=1 TO N
110 INPUT "EMPLOYEE LAST NAME";N$(X)
120 INPUT "HOURS WORKED";H(X)
130 INPUT "HOURLY RATE";R(X)
140 IF H(X)>40 THEN OH(X)=H(X)-40
150 OT(X)=OH(X)*R(X)*1.5
160 IF H(X)<40 THEN RP(X)=H(X)*R(X):GOTO 180
170 RP(X)=40*R(X)
180 TP(X)=RP(X)+OT(X)
190 NEXT X
200 CLS
210 PRINT "EMPLOYEE","REGULAR","OVERTIME","TOTAL"
220 PRINT "  NAME","  PAY","   PAY"," PAY"
230 FOR X=1 TO N
240 TR=TR+RP(X)
250 OV=OV+OT(X)
260 TT=TT+TP(X)
270 PRINT N$(X),
280 PRINT TAB(14)USING A$;RP(X),
290 PRINT TAB(31)USING A$;OT(X),
300 PRINT TAB(46)USING A$;TP(X)
310 NEXT X
320 PRINT TAB(16)"--------";TAB(31)"--------";TAB(46)"--------"
330 PRINT "TOTALS";
340 PRINT TAB(16)USING A$;TR,
350 PRINT TAB(31)USING A$;OV,
360 PRINT TAB(46)USING A$;TT
370 PRINT@896,"PRESS <BREAK> WHEN FINISHED VIEWING"
380 GOTO 380
```

```
10  REM  ********************************************************
20  REM  *    PAYROLL -- CALCULATE GROSS PAY          APPLE II   *
30  REM  ********************************************************
40  REM  *          PROGRAM WILL TAKE 10 EMPLOYEES AND           *
50  REM  *              SHOW RESULTS ON THE SCREEN               *
60  REM  ********************************************************
70  HOME
80  INPUT "HOW MANY EMPLOYEES? ";N
90  FOR X = 1 TO N
100  INPUT "EMPLOYEE LAST NAME: ";N$(X)
110  INPUT "HOURS WORKED: ";H(X)
120  INPUT "HOURLY RATE: ";R(X)
130  IF H(X) > 40 THEN OH(X) = H(X) - 40
140 OT(X) = OH(X) * R(X) * 1.5
150  IF H(X) < 40 THEN RP(X) = H(X) * R(X): GOTO 170
160 RP(X) = 40 * R(X)
170 TP(X) = RP(X) + OT(X)
180  NEXT X
190  HOME
200  PRINT "EMPLOYEE"; TAB( 12)"REGULAR"; TAB( 23)"OVERTIME"; TAB( 35)"TOT
     AL"
210  PRINT "  NAME"; TAB( 14)"PAY"; TAB( 25)"PAY"; TAB( 36)"PAY"
215  PRINT
220  FOR X = 1 TO N
230 TR = TR + RP(X)
240 OV = OV + OT(X)
250 TT = TT + TP(X)
260  PRINT N$(X);
270  PRINT  TAB( 14);RP(X);
280  PRINT  TAB( 24);OT(X);
290  PRINT  TAB( 32)"$ ";TP(X)
300  NEXT X
310  PRINT  TAB( 12)"-------"; TAB( 24)"------"; TAB( 34)"-------"
320  PRINT "TOTALS";
330  PRINT  TAB( 14);TR;
340  PRINT  TAB( 24);OV;
350  PRINT  TAB( 34);TT
360  PRINT : PRINT : PRINT
370  PRINT "PRESS <CTRL C> WHEN FINISHED VIEWING"
380  GOTO 380
```

```
10  REM ********************************************************
20  REM *        CALCULATE NET PAY                   APPLE II    *
30  REM ********************************************************
40  REM *     TAXES ARE CALCULATED USING A SET PERCENTAGE         *
50  REM *        10 RECORDS MAY BE SHOWN ON THE SCREEN            *
60  REM ********************************************************
70  HOME
80  INPUT "HOW MANY EMPOYEES? ";N
90  FOR X = 1 TO N
100  INPUT "EMPLOYEE LAST NAME: ";N$(X)
110  INPUT "TOTAL EARNINGS: ";P(X)
120 FT(X) = P(X) * .16
130 ST(X) = P(X) * .016
140 SS(X) = P(X) * .067
150 TD(X) = FT(X) + ST(X) + SS(X)
160 NP(X) = P(X) - TD(X)
170  NEXT X
180  HOME
190  PRINT "EMPLOYEE"; TAB( 11)"FEDERAL"; TAB( 20)"STATE"; TAB( 27)"FICA";
      TAB( 35)"NET"
200  PRINT "  NAME"; TAB( 13)"TAX"; TAB( 21)"TAX"; TAB( 27)"TAX"; TAB( 35)
     "PAY"
205  PRINT : PRINT
210  FOR X = 1 TO N
220  PRINT N$(X);
225 FT(X) =  INT (100 * FT(X) + .5) / 100
230  PRINT  TAB( 12);FT(X);
235 ST(X) =  INT (100 * ST(X) + .5) / 100
240  PRINT  TAB( 20);ST(X);
245 SS(X) =  INT (100 * SS(X) + .5) / 100
250  PRINT  TAB( 27);SS(X);
255 NP(X) =  INT (100 * NP(X) + .5) / 100
260  PRINT  TAB( 33)"$ ";NP(X)
270 TF = TF + FT(X)
280 TS = TS + ST(X)
290 S2 = S2 + SS(X)
300 TN = TN + NP(X)
310  NEXT X
320  PRINT  TAB( 11)"-------"; TAB( 20)"-----"; TAB( 26)"-----"; TAB( 34)"
     ------"
330  PRINT "TOTALS";
335 TF =  INT (100 * TF + .5) / 100
340  PRINT  TAB( 13);TF;
345 TS =  INT (100 * TS + .5) / 100
350  PRINT  TAB( 20);TS;
355 S2 =  INT (100 * S2 + .5) / 100
360  PRINT  TAB( 27);S2;
365 TN =  INT (100 * TN + .5) / 100
370  PRINT  TAB( 34);TN
380  PRINT : PRINT : PRINT :
385  PRINT "PRESS <CTRL C> WHEN FINISHED VIEWING"
390  GOTO 390
```

```
10 REM *************************************************
20 REM *  PROGRAM TO CALCULATE NET PAY                 *
30 REM *  TAXES ARE CALCULATED USING A SET PERCENTAGE  *
40 REM *  10 RECORDS MAY BE SHOWN ON THE SCREEN        *
50 REM *  WRITTEN FOR THE TRS-80 MODEL III             *
60 REM *************************************************
70 A$="#,###.##"
80 CLS
90 INPUT "HOW MANY EMPLOYEES"; N
100 FOR X = 1 TO N
110 INPUT "EMPLOYEE LAST NAME";N$(X)
120 INPUT "TOTAL EARNINGS";P(X)
130 FT(X)=P(X)*.16
140 ST(X)=P(X)*.016
150 SS(X)=P(X)*.067
160 TD(X)=FT(X)+ST(X)+SS(X)
170 NP(X)=P(X)-TD(X)
180 NEXT X
190 CLS
200 PRINT "EMPLOYEE";TAB(18)"FEDERAL";TAB(34)"STATE";TAB(45)"FICA";TAB(57)"NET"
210 PRINT "  NAME";TAB(20)"TAX";TAB(35)"TAX";TAB(45)"TAX";TAB(57)"PAY"
220 FOR X = 1 TO N
230 PRINT N$(X);
240 PRINT TAB(16)USING A$;FT(X);
250 PRINT TAB(32)USING A$;ST(X);
260 PRINT TAB(42)USING A$;SS(X);
270 PRINT TAB(54)USING A$;NP(X)
280 TF=TF+FT(X)
290 TS=TS+ST(X)
300 S2=S2+SS(X)
310 TN=TN+NP(X)
320 NEXT X
330 PRINT TAB(16)"---------";TAB(32)"---------";TAB(42)"---------";TAB(54)"--------
"
340 PRINT "TOTALS";
350 PRINT TAB(16) USING A$;TF;
360 PRINT TAB(32) USING A$;TS;
370 PRINT TAB(42) USING A$;S2;
380 PRINT TAB(54) USING A$;TN
390 PRINT@896,"PRESS <BREAK> WHEN FINSIHED VIEWING"
400 GOTO 400
```

```
10 CLEAR 100
20 REM ******************************************************
30 REM *  THIS PROGRAM WILL PRORATE INCOME OR EXPENSES       *
40 REM *  AND PRINT OUT THE PERCENTAGE AND DOLLAR AMOUNTS    *
50 REM *  WRITTEN FOR THE TRS-80 MODELS I AND III           *
60 REM ******************************************************
70 CLS
80 INPUT "TOTAL AMOUNT OF INCOME OR EXPENSE";T
90 INPUT "NUMBER OF DEPARTMENTS";N
100 FOR X = 1 TO N
110 PRINT "BASIS FOR PRORATION FOR DEPARTMENT NO.";
120 PRINT X
130 INPUT B(X)
140 TX=TX+B(X)
150 NEXT X
160 CLS
170 PRINT "DEPARTMENT","PRORATION"," TOTAL","PERCENTAGE"
180 PRINT              ," BASIS  "," AMOUNT"
190 PRINT STRING$(64,"-")
200 FOR X=1 TO N
210 R(X)=B(X)/TX
220 A(X)=T/TX*B(X)
230 TR=TR+R(X)
240 TA=TA+A(X)
250 PRINT"  ";X,"   ";B(X),USING"##,###.##";A(X),
260 PRINT"            ";R(X)*100;"%"
270 NEXT X
280 PRINT
290 PRINT"TOTALS","   ";TX,USING"##,###.##";TA,
300 PRINT"           "; TR*100;"%"
310 PRINT@896,"PRESS <BREAK> WHEN FINISHED"
320 GOTO 320
```

```
10  REM *******************************************************
20  REM *           PRORATING INCOME               APPLE II   *
30  REM *                   OR EXPENSES                       *
40  REM *******************************************************
60  HOME
70  INPUT "TOTAL AMOUNT OF INCOME OR EXPENSE: ";T
80  INPUT "NUMBER OF DEPARTMENTS: ";N
90  FOR X = 1 TO N
100  PRINT "BASIS FOR PRORATION FOR DEPARTMENT NO. ";
110  PRINT X
120  INPUT B(X)
130 TX = TX + B(X)
140  NEXT X
150  HOME
160  PRINT "DEPARTMENT";"  PRORATION";"  TOTAL";"  PERCENTAGE" SPC( 14)"BA
     SIS" SPC( 4)"AMOUNT"
180 Y$ = "-":Y = 40: FOR G = 1 TO Y: PRINT Y$;: NEXT
190  FOR X = 1 TO N
200 R(X) = B(X) / TX
210 A(X) = T / TX * B(X)
220 TR = TR + R(X)
230 TA = TA + A(X)
240  PRINT  TAB( 5);X; TAB( 16)B(X) TAB( 24)"$"A(X) TAB( 33)R(X) * 100;"%"

250  NEXT X
260  PRINT
270  PRINT "TOTALS" SPC( 8)TX; TAB( 24)"$"TA; TAB( 33)TR * 100;"%"
280  PRINT : PRINT : PRINT : PRINT :
290  PRINT "PRESS <CTRL C> WHEN FINISHED
300  GOTO 300
310  PRINT "PRESS <CRTL C> WHEN FINISHED"
320  GOTO 320
```

```
10 REM **********************************************
20 REM *   AN ALPHABETIZING PROGRAM                 *
30 REM *   WRITTEN FOR THE TRS-80 MODEL III         *
40 REM **********************************************
50 REM PROGRAM TO ALPHABETIZE
60 FOR X = 1 TO 6
70 LPRINT CHR$(138)
80 NEXT X
90 INPUT "CLASS"; C$
100 ON ERROR GOTO 150
110 R = 0
120 READ L$
130 R = R + 1
140 GOTO 120
150 DIM L$(R)
160 REM ********************
170 REM TO READ LIST
180 REM ********************
190 RESTORE
200 FOR X = 1 TO R
210 READ L$(X)
220 NEXT X
230 REM ********************************************
240 REM TO COMPARE NAMES AND MOVE TO PROPER SEQUENCE
250 REM ********************************************
260 FOR X = 1 TO R-1
270 FOR Y = X + 1 TO R
280 IF L$(Y) >= L$(X) THEN 320
290 LET L1$ = L$(X)
300 LET L$(X) = L$(Y)
310 LET L$(Y) = L1$
320 NEXT Y
330 NEXT X
340 REM *********************
350 REM TO PRINT LIST
360 REM *********************
370 LPRINT C$
380 LPRINT CHR$(138)
390 FOR X = 1 TO R
400 LPRINT X;CHR$(15)L$(X);TAB(78)" "
410 LPRINT CHR$(14)" "
420 NEXT X
430 LPRINT CHR$(138)
440 DATA PETRIE MARY, PICKETT LAURA, MOORE ANGIE, ST CLAIR BRAD,SIMMONS MAGGIE,
TAYLOR MELISSA, JAY KERRI, MAHONEY JENNIFER, PERRY JERRY, WEEKS LEAH ANN, TWIFOR
D JULIE, EIKANAS KRISTI, MARTIN KRISTI, BROWN KEVIN, TRENT TERESA, WILSON TAMMY
450 DATA MILLER DARRY, FENIMORE JAMES, ROBERTSON BOB
460 DATA SPEERS NANCY
470 END
```

INSTRUCTIONS:  REPLACE DATA STATEMENTS--440, 450, ETC.--WITH YOUR OWN LIST OF NAMES.

```
100 REM  ***********************************************
110 REM  *   GENERAL USE                   TRS-80      *
120 REM  ***********************************************
130 REM
140 REM  --PROGRAM TO COMPUTE UNIT PRICES FOR ITEMS PURCHASED.
190 CLS
200 PRINT "THIS PROGRAM WILL COMPUTE THE UNIT PRICE FOR "
210 PRINT "ITEMS PURCHASED.  THE BRAND NAME, PRICE PER UNIT AND
220 PRINT "WHICH BRAND IS CHEAPER WILL BE PRINTED."
230 PRINT
240 INPUT "DO YOU WISH INSTRUCTIONS? ENTER YES OR NO.";I$
250 IF I$ = "YES" GOSUB 550
260 INPUT "ENTER BRAND 1";B1$
270 PRINT
280 INPUT "ENTER NET CONTENTS OF BRAND 1";W1
290 PRINT
300 INPUT "ENTER COST OF PACKAGE 1 "; C1
310 PRINT
320 INPUT "ENTER BRAND 2";B2$
330 PRINT
340 INPUT "ENTER  NET CONTENTS OF BRAND 2";W2
350 PRINT
360 INPUT "ENTER COST OF PACKAGE 2";C2
370 U1 = C1/W1
380 U2 = C2/W2
390 CLS
400 PRINT "THE COST PER UNIT OF " B1$ " IS " U1
410 PRINT
420 PRINT "THE COST PER UNIT OF " B2$ " IS" U2
430 PRINT
440 IF U1<U2 THEN PRINT B1$ " IS LESS EXPENSIVE THAN "B2$
450 PRINT
460 IF U2<U1 THEN PRINT B2$ " IS LESS EXPENSIVE THAN "B1$
470 END
550 PRINT
560 PRINT "PRESS ENTER AFTER EACH ENTRY.  IF CONTENTS ARE LISTED IN MIXED"
570 PRINT "UNITS, CONVERT TO ONE TYPE OF UNIT.  DO NOT ENTER DOLLAR SIGNS"
580 PRINT "OR OTHER LABELS."
590 PRINT
600 RETURN
```

```
100 REM *****************************************
110 REM *  GENERAL USE       APPLE/PET/TRS-80   *
120 REM *****************************************
130 REM
140 REM  CHANGE CLS STATEMENTS TO:
150 REM    PRINT CHR$(147)--PET   HOME--APPLE
160 REM
200 FOR X=1 TO 750
210 X=X+1
220 NEXT X
230 CLS
240 PRINT "SELECT MATH FUNCTION"
250 PRINT "1.  ADD"
260 PRINT "2.  SUBTRACT"
270 PRINT "3.  MULTIPLY"
280 PRINT "4.  DIVIDE"
290 INPUT K
300 IF K<1 OR K>4 PRINT "PLEASE REENTER"
310 ON K GOTO 320,360,400,440
320 INPUT "YOUR TWO NUMBERS";N1,N2
330 A=N1+N2
340 PRINT "YOUR ANSWER IS ";A
350 GOTO 200
360 INPUT "YOUR TWO NUMBERS";N1;N2
370 A=N1-N2
380 PRINT "YOUR ANSWER IS";A
390 GOTO 200
400 INPUT "YOUR TWO NUMBERS";N1,N2
410 A=N1*N2
420 PRINT "YOUR ANSWER IS";A
430 GOTO 200
440 INPUT "YOUR TWO NUMBERS";N1,N2
450 A=N1/N2
460 PRINT "YOUR ANSWER IS";A
470 GOTO 200
```

```
100 REM *********************************************
110 REM *  GENERAL USE                      TRS-80   *
120 REM *********************************************
130 REM
140 REM ----GRADE DISTRIBUTION
145 REM
150 REM  CHANGE THE CLS STATEMENT ON LINE 155 TO:
153 REM      PRINT CHR$(147)---PET   HOME---APPLE
154 REM
155 CLS:INPUT "PLEASE ENTER TEST NUMBER OR NAME AND DATE (WITH COMMAS)";NN$,D$
156 INPUT "PLEASE ENTER TEACHER'S NAME";N$
160 CLS:PRINT "INPUT A GRADE<PRESS ENTER>"
170 PRINT "    TYPE -99 TO STOP"
180 INPUT G
190 IF G>100 THEN PRINT "<REENTER>":FOR X = 1 TO 500:NEXT X::GOTO 160
210 IF G=-99 THEN GOTO 238
220 IF G>92 THEN A=A+1
230 IF G>85 AND G<93 THEN B=B+1
233 IF G>76 AND G<86 THEN C=C+1
234 IF G>70 AND G<77 THEN D=D+1
235 IF G<70 THEN F=F+1
236 GOTO 160
238 CLS:PRINT "DISTRIBUTION PREPARED FOR ";N$:PRINT NN$;"---------DATE "D$
239 PRINT:PRINT "GRADES","DISTRIBUTION"
240 PRINT:PRINT"93 TO 100";
243 IF A=0 THEN GOTO 280
250 FOR K=1 TO A
260 PRINTTAB(15+K) "*";
270 NEXT K
280 PRINT:PRINT "86 TO 92";
285 IF B=0 THEN GOTO 320
290 FOR K= 1 TO B
300 PRINTTAB(15+K)"*";
310 NEXT K
320 PRINT:PRINT "78 TO 85";
330 IF C=0 THEN GOTO 370
340 FOR K=1 TO C
350 PRINTTAB(15+K)"*";
360 NEXT K
370 PRINT:PRINT "70 TO 77";
380 IF D=0 THEN GOTO 480
390 FOR K=1 TO D
400 PRINTTAB(15+K)"*";
420 NEXT K
480 PRINT:PRINT "BELOW 70";
490 IF F=0 THEN END
500 FOR K=1 TO F
510 PRINTTAB(15+K)"*";
520 NEXT K
```

```
100 REM ******************************************
110 REM *   GENERAL USE        APPLE/PET/TRS-80  *
120 REM ******************************************
130 REM
140 REM ---PROGRAM TO AVERAGE A SET NUMBER OF GRADES
150 REM
155 CLS
160 INPUT "ENTER YOUR NAME";N$
170 INPUT "HOW MANY GRADES";N
180 FOR X=1 TO N
190 PRINT "ENTER GRADE"X;
200 INPUT G
210 T=T+G
220 C=C+1
230 NEXT X
240 A=T/C
250 PRINT N$" YOUR AVERAGE IS ";A
```

---

```
100 REM ***************************************
110 REM * GENERAL USE      APPLE/PET/TRS-80   *
120 REM ***************************************
130 REM
140 REM ---PROGRAM TO FIGURE GRADE POINT AVERAGE
150 REM
153 REM  CHANGE THE CLS STATEMENT IN LINE 158 TO:
155 REM     PRINT CHR$(147)---PET   HOME---APPLE
158 CLS
160 INPUT "WHAT IS YOUR NAME";N$
170 PRINT "NUMBER OF A'S, B'S, C'S, D'S, AND F'S (ENTER WITH COMMAS)"
175 INPUT A,B,C,D,F
180 GA=(A*4+B*3+C*2+D*1)/(A+B+C+D+F)
190 PRINT N$" YOUR GRADE POINT IS";GA
```

```
100 REM *******************************************
110 REM *  GENERAL USE        APPLE/PET/TRS-80    *
120 REM *******************************************
130 REM
140 REM  ---PROGRAM TO AVERAGE UNLIMITED NUMBER OF GRADES
145 REM
150 REM  CHANGE THE CLS STATEMENT IN LINE 155 TO:
153 REM    PRINT CHR$(147)--PET     HOME--APPLE
155 CLS
160 INPUT "ENTER YOUR NAME";N$
165 PRINT "ENTER -99 WHEN DATA IS COMPLETE"
170 PRINT:INPUT "ENTER A GRADE---";G
180 IF G=-99 THEN GOTO 220
190 T=T+G
200 C=C+1
210 GOTO 170
220 A=T/C
230 PRINT:PRINT N$" YOUR AVERAGE IS ";A
```

```
50 REM HOURLY WAGES
60 REM WRITTEN FOR THE ATARI
70 DIM N$(25)
80 PRINT "}":REM CLEAR THE SCREEN
90 PRINT "TYPE IN THE EMPLOYEE'S"
100 PRINT "NAME,HOURS WORKED, AND"
110 PRINT "WAGES PER HOUR.  I WILL"
120 PRINT "TELL YOU THE TOTAL SALARY"
130 PRINT
140 PRINT "EMPLOYEE",:INPUT N$
150 PRINT
160 PRINT "HOURS WORKED?",:INPUT H
170 PRINT "WAGES PER HOUR ?",:INPUT W
180 T=W*H
190 PRINT "TOTAL EARNINGS    $ ";T
200 PRINT
210 GOTO 140
300 REM TO STOP PUSH BREAK KEY
```

---

```
10 REM GRADE AVERAGE
15 REM WRITTEN FOR THE ATARI
20 DIM N$(25)
25 PRINT "}":REM CLEAR THE SCREEN
30 PRINT "WHEN YOU WANT TO STOP ENTERING"
35 PRINT "SCORES, TYPE 999"
40 PRINT
45 PRINT "STUDENT'S NAME?":INPUT N$
50 PRINT
55 PRINT "WHAT ARE ";N$;"'S SCORES"
60 PRINT "SCORES ",:INPUT Z
65 IF Z=999 THEN 100
70 N=N+1:T=T+Z
80 A=T/N
90 GOTO 60
100 PRINT
120 PRINT N$;"'S AVERAGE IS   ";A
```

---

```
50 REM ADDITION OF NUMBERS
60 REM WRITTEN FOR THE ATARI
70 DIM A$(20)
75 PRINT "}":REM CLEAR SCREEN
80 PRINT "   ADDITION OF NUMBERS"
85 PRINT
90 PRINT "ENTER X TO STOP ADDITION"
95 PRINT
100 PRINT "NUMBERS",:INPUT A$
110 IF A$="X" THEN 150
120 B=VAL(A$)
130 C=C+B
140 GOTO 100
150 PRINT :PRINT :PRINT
160 PRINT "TOTAL IS ";C
```

```
10 REM *AVERAGE AND MEAN
15 REM *WRITTEN FOR THE ATARI
20 PRINT "}":REM *CLEAR THE SCREEN
30 PRINT "  AVERAGE & MEAN   ":PRINT
40 PRINT "WHEN YOU WANT TO STOP ENTERING"
50 PRINT "NUMBERS, TYPE 000"
60 PRINT
70 PRINT "NUMBER",:INPUT Z
80 IF Z=0 THEN 110
90 N=N+1:T=T+Z
100 GOTO 70
110 A=T/N
120 PRINT
130 PRINT " THE AVERAGE IS  ";A
140 M=T/2
160 PRINT " THE MEAN IS      ";M
```

---

```
40 REM CHECKBOOK BALANCE
50 REM WRITTEN FOR THE ATARI
60 ? "}":REM CLEAR THE SCREEN
70 ? "     CHECKBOOK BALANCE":?
80 ? "(ALWAYS ENTER A NUMBER OR 0":? "AFTER THE ?)":? :?
90 ? "BEGINNING BALANCE",:INPUT E
100 ? "CHECK #",:INPUT K
110 ? "AMOUNT ",:INPUT A
120 ? "DEPOSIT",,:INPUT D
130 LET N=E+D-A
140 ? "NEW BALANCE ",;N
150 LET E=N
160 GOTO 100
500 REM TO STOP PUSH BREAK KEY
600 REM ***TO PRINT USE LPRINT INSTEAD OF PRINT (?)
```

---

```
50 REM TEACHER INVENTORY
55 REM WRITTEN FOR THE ATARI
60 PRINT "}":REM CLEAR THE SCREEN
65 DIM TITLE$(40)
70 PRINT "TEACHER INVERTORY":?
75 PRINT "TITLE"
80 INPUT TITLE$
85 PRINT "COST $ ",,:INPUT C
90 LET T=T+C
95 PRINT "TOTAL EXPENSE $",,;T:?
100 GOTO 75
200 REM TO STOP PUSH BREAK KEY
```